

SIXTH FIVE-YEAR REVIEW REPORT FOR  
SOLID STATE CIRCUITS, INC. SUPERFUND SITE  
GREENE COUNTY, MISSOURI

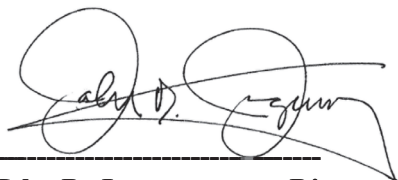


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08/15/2022

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## LIST OF ABBREVIATIONS & ACRONYMS

1,1,1-TCA	1,1,1-trichloroethene
1,1-DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
ARAR	Applicable or Relevant and Appropriate Requirement
CD/SOW	Consent Decree/Statement of Work
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
<i>cis</i> -1,2-DCE	<i>cis</i> -1,2-dichloroethene
COC	Contaminants of Concern
COPC	Contaminants of Potential Concern
DBR	Deep Bedrock
EPA	United States Environmental Protection Agency
ESD	Explanation of Significant Difference
EWI	Environmental Works, Inc.
FFS	Focused Feasibility Study
FM/ED	Force Majeure/Excusable Delay
FMSSE	Force Majeure Supplemental Sampling Event
FYR	Five-Year Review
HHRA	Human Health Risk Assessment
ICs	Institutional Controls
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goals
MDHSS	Missouri Department of Health and Senior Services
MoDNR	Missouri Department of Natural Resources
MRAC	Missouri Remedial Action Corporation
MWQS	Missouri Water Quality Standards
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NPL	National Priorities List
O&M	Operation and Maintenance
OU	Operable Unit
POTW	Publicly Owned Treatment Works
PRP	Potentially Responsible Party
RAO	Remedial Action Objectives
RD/RA	Remedial Design/Remedial Action
Registry	Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
RP	Responsible Party
RPM	Remedial Project Manager
SBR	Shallow Bedrock
SDC	Supplemental Data Collection
SLERA	Screening Level Ecological Risk Assessment
SSC	Solid State Circuits
SSI	Supplemental Site Investigation
TBC	To be considered
TCE	Trichloroethylene/Trichloroethene
TCL	Target Compound List
<i>trans</i> -1,2-DCE	<i>trans</i> -1,2-dichloroethene
UFSB	Unconsolidated/Fractured Shallow Bedrock
UU/UE	Unlimited Use and Unrestricted Exposure

VII	Vapor Intrusion Investigation
VISL	Vapor Intrusion Screening Level
VOCs	Volatile Organic Compounds



## I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in five-year review reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The Missouri Department of Natural Resources (MoDNR) is preparing this five-year review with assistance from the U.S. Environmental Protection Agency (EPA), pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Contingency Plan (NCP)(40 CFR Section 300.430(f)(4)(ii)), and considering EPA policy.

This is the sixth FYR for the Solid State Circuits, Inc. (SSC) Superfund Site (Site). The triggering action for this statutory review is the September 19, 2017, completion date of the fifth FYR. The FYR has been prepared because hazardous substances, pollutants, or contaminants remain at the site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of one Operable Unit (OU), which will be addressed in this FYR. TJ Graven,(MoDNR) Remedial Project Manager (RPM) led the Sixth Solid State Circuits, Inc. Superfund Site Five-Year Review. Participants included David Koenigsfeld, MoDNR RPM; Nicole Niehues, Missouri Department of Health and Senior Services (MDHSS) human health risk assessor; Laura Price, EPA RPM; Jessica L. Kidwell, EPA hydrogeologist; Todd Phillips, EPA human health risk assessor; and Venessa Madden, EPA ecological risk assessor. The relevant entities such as the potentially responsible party (PRP) were notified of the initiation of the five-year review. The MoDNR is submitting this sixth FYR report for the Solid State Circuits, Inc. site to the EPA for its concurrence pursuant to 40 CFR §300.515. The review began on 8/19/2021.

### **Site Background**

The former SSC manufacturing facility (Site) is located in T29N, R23W Section 20 or 37° 07' 00" N, 93° 28' 48" W, on the southeast corner of the intersection of Main and Elm Streets in Republic, Missouri (Figure 1). Republic is approximately 12 miles southwest of Springfield in Greene County, Missouri, with a population of 18,750 residents (2020 City of Republic). The Site includes the northern end of a former plant building, the contaminated soils below and around the former building, and contaminated portions of the underlying groundwater aquifers. A six-foot high chain link fence encloses the lot on which the facility existed, covering approximately one-half acre.

A milling company constructed the original plant building and basement some time prior to 1902. The building's northern portion was four stories tall, and the rest was one story tall. From 1902 to 1937, a cold refrigeration plant operated in the building's northern portion. Numerous businesses operated in the building from 1937 to 1968, but little is known about specific uses. SSC operated in the building's northern portion from 1968 until 1973, when it moved its operation to Springfield, Missouri. SSC manufactured printed circuit boards and used trichloroethene (TCE) as a degreaser. The amount of TCE used is unclear due to poor record keeping. A photographic processing firm operated in the northern portion of the building from 1973 until 1979, when the northern portion burned. The burned portion was demolished, the debris was pushed into the basement, and the basement area was filled-in to grade. The parcel containing both the burned northern portion, and still-standing southern portion of the plant building sold at auction on August 25, 2017. The parcel's new owners demolished the southern portion of the building, and, on May 10, 2018, subdivided the parcel into two parcels. The former SSC manufacturing facility, including the Site's source area, occupy the northern parcel, while the southern parcel is a vacant gravel lot (Figure 2). The Site has impacted three aquifers, the unconsolidated/fractured bedrock (UFSB) system, the shallow bedrock (SBR) system, and the deep bedrock (DBR) system. UFSB and SBR correspond to the Springfield Aquifer, and the DBR corresponds to the Ozark Aquifer (Figures 10, 11 & 12). For simplicity, the

terms “on-site” and “off-site” are used within this document when differentiating between the property where the SSC formerly operated versus the portion of the site outside of the property.

The Site lies in the downtown Republic and the surrounding land use is urban (Figure 3). The Site is surrounded by residential areas. The closest is a triplex east of the Site and across the 100’ alleyway. Most other residential areas are two blocks northeast, south, east and west. Many of the dwellings are single family homes; although a six-family complex and a duplex are located on Main Street, two to four blocks south of the Site. Commercial properties, light industry, and warehouses are intermingled with the single family dwellings to the west. The city of Republic’s properties and light industry are located north across the railroad tracks and two blocks south of the Site.

### **FIVE-YEAR REVIEW SUMMARY FORM**

<b>SITE IDENTIFICATION</b>		
<b>Site Name:</b> Solid State Circuits, Inc.		
<b>EPA ID:</b> MOD980854111		
<b>Region:</b> 7	<b>State:</b> MO	<b>City/County:</b> Republic/Greene
<b>SITE STATUS</b>		
<b>NPL Status:</b> Final		
<b>Multiple OUs?</b> No	<b>Has the site achieved construction completion?</b> Yes	
<b>REVIEW STATUS</b>		
<b>Lead agency:</b> State <i>[If “Other Federal Agency”, enter Agency name]:</i>		
<b>Author name (Federal or State Project Manager):</b> TJ Graven, David Koenigsfeld		
<b>Author affiliation:</b> Missouri Department of Natural Resources		
<b>Review period:</b> 8/19/2021 – 12/29/2021		
<b>Date of site inspection:</b> 12/14/2021		
<b>Type of review:</b> Statutory		
<b>Review number:</b> 6		
<b>Triggering action date:</b> 9/19/2017		
<b>Due date (five years after triggering action date):</b> 9/19/2022		

## II. RESPONSE ACTION SUMMARY

### Basis for Taking Action

Sample data collected during the pre-remedial and remedial investigations and removal actions up to and including the Remedial Investigation/Feasibility Study (RI/FS) identified over 34 Contaminants of Potential Concern (COPCs) on-site and/or off-site, including Volatile Organic Compounds (VOCs) and metals. VOC contamination, predominantly TCE, was detected in various media, including on-site and off-site soils, on-site and off-site groundwater in the three hydrogeologic aquifers, utility corridors and manholes, and the influent wastewater to the Publicly Owned Treatment Works (POTW). A summary of the detected COPCs are found in Table 1.

**Table 1: Contaminants of Potential Concern**

VOCs	VOCs (cont'd)	VOCs (cont'd)	METALS
Acetone	2-Chloroethyl Vinyl Ether	2-Hexanone	Chromium
Benzene	Chloroform	Methylene Chloride	Copper
Bromodichloromethane	Chloromethane	4-Methyl-2-Pentanone	Lead
Bromoform	1,1-Dichloroethane	Tetrachloroethene (PCE)	Mercury
Bromomethane	1,1-Dichloroethene	Toluene	Nickel
2-Butanone (MEK)	1,2-Dichloroethane	1,1,1-Trichloroethane	Zinc
Carbon Disulfide	1,2-Dichloroethene (total)	1,1,2-Trichloroethane	
Carbon Tetrachloride	1,2-Dichloropropane	Trichloroethene	
Chlorobenzene	cis-1,3-Dichloropropene	Vinyl Acetate	
Chlorodibromomethane	trans-1,3-Dichloropropene	Vinyl Chloride	
Chloroethane	Ethylbenzene	Xylenes (total)	

Due to the large number of COPCs and the wide variations in occurrence, concentrations, and toxicities found among the COPCs, a selection process was implemented to identify Contaminants of Concern (COCs) in groundwater for evaluation in the Human Health Risk Assessment (HHRA) and Screening Level Ecological Risk Assessment (SLERA) (Table 2). The detection of contaminant concentrations above health-based standards was the basis for choosing the Site's COCs. Metals were not considered since their measured groundwater concentrations were below health-based standards.

**Table 2: Contaminants of Concern**

COCs	Compliance Levels
1,1-dichloroethane (1,1-DCA)	None
1,1-dichloroethene (1,1-DCE)	7 µg/l
cis-1,2-dichloroethene (cis-1,2-DCE)	70 µg/l
trans-1,2-dichloroethene (trans-1,2-DCE)	100 µg/l
1,1,1-trichloroethane (1,1,1-TCA)	200 µg/l
trichloroethene (TCE)	5 µg/l
vinyl chloride (VC)	2 µg/l

The Site COCs were evaluated in the HHRA and the SLERA. The carcinogens evaluated in the risk assessments were 1,1-DCA, TCE, and vinyl chloride, while the noncarcinogens evaluated were 1,1-DCE, cis-1,2-DCE, trans-1,2-DCE and 1,1,1-TCA. At the time of the risk assessments, federal and state standards and criteria existed to protect drinking water and fresh-water aquatic life. The federal standards Maximum Contaminant Levels (MCLs) and/or Missouri Water Quality Standards (MWQS) existed for the 1,1-DCE, 1,1,1-TCA, TCE, and vinyl chloride.

Maximum Contaminant Level Goals (MCLGs) existed for trans-1,2-DCE. No regulatory standards existed for 1,1-DCA or cis-1,2-DCE.

Based on the HHRA, no unacceptable health risks were identified for current receptors on and around the Site; however, there was the potential for future unacceptable risks. Future risks could be the result of dermal contact with the Site or ingestion of contaminated groundwater from beneath or in close proximity to the Site.

The following assumptions were made to prevent future risk: that the contaminated groundwater at or near the Site will not be used for human consumption; that private and public wells will not be drilled through or near the contaminant plumes (see City of Republic groundwater use limits, Figure 6); and the remediation of the contaminated groundwater would continue as required.

Based on the results of the SLERA, no adverse effects were identified for terrestrial or aquatic ecosystems. There was no indication of threatened or endangered wildlife species; however, it was determined that should the groundwater/surface water comprising Roberts Spring become contaminated by site-related VOC contamination in the future that it could potentially pose a new ecological risk.

### **Response Actions**

TCE was detected in Republic's municipal well CW-1 (Figure 5) during the National Synthetic Organic Chemical (NSOC) Survey in June 1982. The MoDNR and Missouri Remedial Action Corporation (MRAC), the responsible party (RP), conducted response actions at the Site in 1984. Extensive soil and groundwater sampling was done to delineate the on-site and off-site contamination. Soil and groundwater sampling delineated the on-site contaminated soils and debris that exceeded risk-based action levels for commercial/industrial use and determined the location of the basement well, a contaminated well that served as a pathway for contaminants to migrate into deeper groundwater zones. Using the risk-based action levels for commercial/industrial use, the on-site contaminated soils and debris were excavated around the former plant building basement and were stored on-site until a proper disposal facility was located.

After signing an Action Memorandum, the EPA undertook an immediate removal action in 1985. EPA conducted additional soil and groundwater sampling to determine the extent of the on-site contamination. Since additional sub-basement soils and debris were found contaminated, these contaminated materials were excavated to bedrock and shipped off-site along with the previously stockpiled contaminated materials for disposal. Using the risk-based action levels for commercial/industrial use, the potential existed for a portion of the basement foundation and elevator shaft, along with associated soils to have been left in place. The basement well was abandoned per Missouri state regulations and the excavation was filled to grade. All on-site work was completed in October 1985.

A Remedial Investigation/Feasibility Study (RI/FS) was conducted from December 1985 to July 1989, during which multi-media monitoring and sampling events were conducted. Sampling included on-site and off-site air, surface and sub-surface soils, utility corridors, surface water and groundwater. Additional work included the installation of monitoring wells and the construction of a new Republic municipal well City Well #4 (CW-4) shown in Figure 5. The two air strippers were constructed and a pilot study was implemented to evaluate the extraction and treatment of the TCE and other VOC contaminated groundwater.

### **Remedy Selection**

The Record of Decision (ROD) for the Site was signed on September 27, 1989. Based on the data collected up to and during the RI and the evaluation of health risks, Remedial Action Objectives (RAOs) were developed for the Site to aid in the development and screening of the remedial action alternatives. Based on the 1984 and 1985 soil and groundwater sampling and the on-site soil and debris removal actions completed, it was assumed that the previous response actions had completely addressed (discovered, excavated and disposed off-site) the full extent of the on-site contaminated soil and debris by October 1985, the following RAOs were identified during the remedy selection process only for the contamination in the three groundwater aquifers. The RAOs include:

- Prevent potential exposure to contamination in groundwater;
- Protect uncontaminated groundwater for future use by preventing further migration of the contaminated plumes in the groundwater; and
- Restore contaminated groundwater for future use by reducing the contaminant concentrations to regulated or health-based levels.

The major components of the selected remedy in the ROD were:

1. Extraction of contaminated groundwater from the three aquifers;
2. On-site physical/chemical treatment using air stripping to promote volatilization of the contaminants from the extracted groundwater;
3. Discharge of treated effluent to the Republic Publicly Owned Treatment Works (POTW) to undergo additional off-site treatment;
4. Enactment of an ordinance by the city of Republic to prevent construction of drinking water wells in or near the contaminated plumes to prevent direct contact/ingestion of contaminated groundwater before remediation is complete; and
5. Continued monitoring to determine the effectiveness of the remedy.

### **Status of Implementation**

The EPA issued a Remedial Design/Remedial Action (RD/RA) Special Notice Letter on December 13, 1989. Following extensive negotiations between the RP (MRAC) and the Agencies, the Consent Decree/Statement of Work (CD/SOW) was signed by the MRAC and the Agencies in July 1990. The CD/SOW was lodged with the court on January 6, 1991, and then entered by the court on May 31, 1991; thus initiating the start of RD.

As part of the RD/RA process, a second pilot study was initiated to test various extraction well pumping schemes in order to better define the pumping and discharge rates. The results of the second pilot study were incorporated into the 100% Remedial Design Document Package (RDDP) that was submitted to the Agencies in October 1992. The Agencies determined that the proposed system for removing TCE from the extracted contaminated groundwater was 98% to 99% efficient. On December 22, 1992, the Department approved, and the EPA concurred with, the 100% RDDP for the groundwater cleanup alternative.

The RA construction began on January 11, 1993, and included the installation, testing, and sampling of wells and the groundwater pump and treatment system. The RA consisted of groundwater extracted from the UFSB, the SBR, and the DBR using extraction wells to remove VOC contamination from the three hydrogeologic aquifers to control the movement of the VOC contamination in groundwater and to prevent the movement of the VOC contamination in groundwater into the Republic municipal wells. Groundwater flow direction for each aquifer can be found in Figures 14, 15, and 16. The Site's monitoring network consisted of on-site and off-site UFSB wells, off-site SBR wells, on-site and off-site DBR wells, Republic's active municipal wells, Roberts Spring, Cave Well, Republic's POTW, and two Sewer Discharge locations, and the on-site. Republic's municipal well CW-2 was taken off-line during this time for reasons unrelated to the Site, and Republic's new municipal well CW-5 was constructed and brought on-line (Figure 4 & 5). The RA construction actions were completed on September 20, 1993.

On October 29, 1993, the MoDNR sent the EPA the Preliminary Closeout Report for the Site. The EPA signed the document on December 1, 1993. In March 1994, the MoDNR conducted a pre-certification inspection of the RA at the Site. The inspection determined that the RA construction was complete and that the remedy was operational and functional (O&F). The EPA concurred with the O&F determination on May 19, 1994. On May 31, 1994, the MoDNR received the RA Certification Report and As-Built Drawings for the Site. The Agencies sent MRAC the "Certification of Completion of the Remedial Action" for the Site in September 1994. The

document notified the MRAC that the remedy for the SSC site was O&F, and it initiated the Site's long-term O&M.

### **IC Summary Table**

**Table 3: Summary of Planned and/or Implemented ICs**

<b>Media, engineered controls, and areas that do not support UU/UE based on current conditions</b>	<b>ICs Needed</b>	<b>ICs Called for in the Decision Documents</b>	<b>Impacted Parcel(s)</b>	<b>IC Objective</b>	<b>Title of IC Instrument Implemented and Date (or planned)</b>
Groundwater	Yes	Yes	OU1/ Sitewide	Informs public and buyers of location and status of contaminated properties	Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in MO 2/22/1985
Groundwater	Yes	Yes	OU1/ Sitewide	Sets well construction standards for water wells drilled in designated areas of MO	MO Water Well Construction Code/Regulations for Drilling Area 9 (Greene County and parts of Christian county), formerly "Sensitive Area C" designation 11/16/1993 (Figure 7)
Groundwater	Yes	Yes	OU1/ Sitewide	Restricts installation of groundwater wells and groundwater use	Republic's well construction ordinance Ord. No. 05-68 §1 12/31/1988 (Figure 6)

### **Systems Operations/Operation & Maintenance**

After construction was completed at the Site, long-term O&M was required to evaluate the monitoring actions and site management as part of the groundwater RA. On September 23, 1994, the MoDNR received the final copy of the "Addendum Report to the RA Groundwater Monitoring and Management Plan (GMMP)." The GMMP contains the specific tasks required to monitor and maintain the remedy including hydraulic control measures for the three hydrogeologic aquifers (UFSB, SBR, and DBR), management of the extraction and monitoring wells, data collection and analysis, management practices, data reporting, and Quality Assurance/Quality Control (QA/QC) requirements. O&M activities also included a periodic review of Republic's well construction ordinance. The last revision of Republic's well construction ordinance, Ord. No. 05-68 §1, was August 22, 2005. The Agencies had an opportunity to review and comment on the ordinance before it was finalized.

In addition to the operating RA system, MRAC submitted a proposal to use a horizontal well as an innovative technology to assist in the remediation of the TCE contamination found in the UFSB on July 15, 1997. The horizontal well was installed north to south along Main Street in 2001, tested, and deemed operational. An Explanation of Significant Differences was signed in September 2004, formally adding the horizontal well to the selected remedy. The horizontal well was in continuous operation until a fire occurred on December 8, 2011.



The fire destroyed the pump and treat systems operation building, resulting in the cessation of groundwater extraction and treatment at the Site. The exception is the SSC-31 well where maintenance of the well and extraction continues and the extracted water is directly discharged to the city of Republic sanitary sewer. The Agencies were verbally notified of the building's destruction on December 8, 2011, and a written notification of Force Majeure/Excusable Delay (FM/ED) situation was submitted on December 16, 2011, in accordance with the Consent Decree. The Agencies approved the FM/ED notification on December 29, 2011.

To guide in future site activities, MRAC and the MoDNR entered into an Agreement for Additional Reasonably Necessary Time Regarding Force Majeure/Excusable Delay (FM/ED) Agreement was developed and signed on June 15, 2012, and modified on December 8, 2014, August 31, 2017, March 31, 2018, June 30, 2019, and most recently on June 30, 2020 (MDNR & MRAC, Inc., 2012; Appendix D). The FM/ED Agreement outlines future pilot studies/remedial actions, vapor intrusion investigation activities, focused feasibility study data gaps field work, force majeure supplemental sampling events, and a focused feasibility study report to include a site-wide updated conceptual site model, HHRA and SLERA, and remedial alternatives evaluation. The FM/ED Agreement states a final termination date of December 31, 2024. The Agencies requested that the MRAC continue to conduct groundwater monitoring/ sampling under the FM/ED Agreement. The groundwater monitoring/sampling has allowed for the evaluation of the effects of the cessation of pumping across the SSC site and the effects of Area 1 and Areas 2/3 pilot program remediation efforts. These site-related actions and the results (Appendix C) are chronicled in Force Majeure Supplemental Sampling Events (FMSSEs) Reports. As of October 2020, 24 FMSSEs have been performed. Following the fire, two bimonthly sampling events were conducted in 2012. Data from the bimonthly sampling events demonstrated the plume had not changed following cessation of pumping activities and limited rebound had occurred. Based on this, quarterly sampling was initiated and continued through 2015 before modifying to a semi-annual and annual schedule.

### **Area 1 Pilot Program**

The first Area 1 Pilot Program conducted in 2012 was comprised of soil blending and treatment activities summarized in the fifth FYR report. A second Area 1 Pilot Program began in June 2020 and is currently underway. The current pilot program is comprised of a combination of in-situ chemical reduction and biologically-mediated enhanced reduction dechlorination. This pilot program is divided into three phases:

1. Regenisis and Environmental Works Incorporated conducted injection activities in June and July 2020.
2. Approximately one month after injection activities, post-injection water quality measurements were collected at the wells sampled during the baseline event. This initial sampling demonstrated the treatment had already resulted in stronger reducing conditions. The first post-injection monitoring event was performed in September/October 2020. Post-injection monitoring continues to show an overall decrease in contaminant concentrations across the treated area (Appendix C). Post-injection monitoring will continue through spring 2022 in accordance with the approved pilot program work plan.
3. Upon completion of phase two, a final report will be prepared to summarize all work performed and data collected during the previous phases to evaluate the effectiveness of the treatment. This phase three report will make recommendations for additional injections or post-treatment monitoring if appropriate.

## **III. PROGRESS SINCE THE LAST REVIEW**

This section includes the protectiveness determinations and statements from the last five-year review as well as the recommendations from the last five-year review and the current status of those recommendations.

**Table 4: Protectiveness Determinations/Statements from the 2017 FYR**

OU #	Protectiveness Determination	
<b>Sitewide/OU1</b>	Protectiveness Deferred	A protectiveness determination of the remedy cannot be made at this time until further information is obtained, under the FM/ED agreement and after associated delineation and pilot study activities are completed. Further data and information will be obtained by taking the following actions: completing a Focused Feasibility Study and an updated Human Health Risk Assessment including a comprehensive vapor intrusion study of all structures overlying and near potentially impacted groundwater, delineating the groundwater plume in all three groundwater units, and evaluating the effectiveness of ongoing soil source area pilot studies. It is expected that these actions will take approximately 3.5 years to complete, at which time a protectiveness determination will be made.

**Table 5: Status of Issues and Recommendations from the 2017 FYR**

OU #	Issue	Recommendations	Current Status	Current Implementation Status Description*	Completion Date (if applicable)
<b>Sitewide/OU1</b>	Delineate horizontal and vertical limits of UFSB, SBR, and DBR plumes	Install additional monitoring wells in the UFSB, SBR and DBR, where needed, to confirm the horizontal and vertical plume boundaries.	Ongoing	An additional well (SSC-195) will be installed southeast of Area 1, to evaluate if contaminants are migrating through the FSB. In the SBR, horizontal delineation is adequately achieved by SSC-3A. In the DBR, two additional wells will be installed to address horizontal delineation in 2022.	<a href="#">Click here to enter a date</a>
<b>Sitewide/OU1</b>	Vapor Intrusion evaluation needs to be conducted	Conduct quantitative vapor intrusion (VI) study to evaluate the VI pathway.	Completed	Vapor intrusion evaluation is ongoing, additional efforts are	9/26/2017



				planned for 2022.	
<b>Sitewide/OU1</b>	Remediate/remove soil source areas	Treat/remove the three VOC contaminated soil source areas.	Completed	Area 1 soils were treated in 2012. Areas 2 and 3 soils were treated in 2015. Area 1 was treated again in 2020. Post treatment monitoring of Area 1 is expected to continue through spring 2022. Additional soil sampling in Areas 2 and 3 is anticipated in 2022	7/31/2020
<b>Sitewide/OU1</b>	Implement additional institutional controls (ICs)	Implement additional ICs by recording an environmental covenant (EC) with the SSC property's chain of title.	Addressed in Next FYR	A draft EC was prepared for the southern parcel, negotiations for landowner signature are ongoing.	Click here to enter a date
<b>Sitewide/OU1</b>	Assure compliance with and implementation of work required by Force Majeure/Excusable Delay (FM/ED) Agreement.	Investigate and remediate the soil source areas and groundwater, and conduct a Focused Feasibility Study under the FM/ED Agreement.	Completed	Data collection following FFSWP activities is expected to continue to 2025. A FFS is anticipated to be submitted by the end of 2025	7/31/2020

## IV. FIVE-YEAR REVIEW PROCESS

### Community Notification, Involvement & Site Interviews

A public notice was made available by electronic newspaper, Springfield News-Leader.com on Sunday, September 12, 2021, stating that there was a five-year review and inviting the public to submit any comments to the U.S. EPA (Appendix F). The results of the review and the report will be made available at the Site information repository located online at EPA's Site Profile Page at: [www.epa.gov/superfund/solidstatecircuit](http://www.epa.gov/superfund/solidstatecircuit). in September of 2022.

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date. Two interviews were conducted one was with Anthony Moore the RP's consultant and Garrett Brikner the Engineer Manager for the City of Republic. The results of these interviews are summarized below.

A primary concern with the site is related to the timeframe with which remediation goals can be met. Respondents felt that while exposure pathways were resolved when they appeared, the site appears it, "will not likely have an ultimate solution anytime soon." Respondents also expressed some concern over the slight shifting of the groundwater contaminant plume, but did not have the impression of major contaminant migration.

### **Data Review**

Soil, soil gas, groundwater and indoor air sampling was collected during the sixth FYR period (Appendix C). This FYR data review is from July 16, 2016 through August 19, 2021.

### **Soil Gas & Indoor Air**

Soil gas sampling was performed at 16 soil vapor (monitoring) points (SVPs) installed at five feet below surface and 21 sub-slab points within the Main Street right-of-way, Brooks Street right-of-way, and east of Area 1 (Figures 20, 21, and 22). A full summary of soil gas data is provided in Appendix C Table 12.

Based on soil gas sampling results, indoor air sampling was proposed for selected residential properties along Main and Brooks Streets (PR02, PR04, PR05, PR08, PR12, PR15, PR17B, PR17C, PR17D, and PR18) (Figure 23). Access was granted for one sampling event at PR08 and PR17B, and for multiple sampling events at PR04. Access was not granted for the remaining properties. No COCs were reported above USEPA Vapor Intrusion Screening Levels (VISLs) for the sampling performed at PR08 and PR17B. No COCs were reported above VISLs for the first sampling event at PR04, but TCE was reported above the VISL during subsequent events, which resulted in the installation of a sub-slab depressurization system beneath the basement floor. Results for subsequent indoor air sampling events were comparable with pre-system results and so a smoke test was performed to determine whether the sewer was a preferential pathway for vapors to enter this home, and that was found to be the case. Faulty plumbing was identified and the plumbing was repaired. Subsequent sampling data have demonstrated that COCs reported in indoor air samples have confirmed the plumbing repairs have adequately addressed vapor intrusion into this home and have reduced COC concentrations to below levels of health concern. One additional confirmation sampling event will be conducted for this home. Indoor air, sub-slab, and sewer sampling events related to indoor air monitoring and PR04 vapor intrusion mitigation work are summarized in Appendix C Table 11.

In support of Vapor Intrusion Investigation activities, following soil gas investigation, fifteen soil borings were collected in the Main Street and Brooks Street right of ways in 2018, as shown in Figure 24. The highest concentration detected was at SSC-184 (0.351 mg/kg), with only a few other detections. This soil sampling did not suggest any significant soil contamination is present in area 4. A summary of soil sampling data from Area 4 is provided in Appendix C Table 15.

### **Sanitary Sewer**

Since the sewer was identified as a preferential pathway for vapor intrusion into buildings, sewer sampling efforts began in June 2020. Sewer water and air samples were collected at locations shown in Figure 25. TCE was detected in the sewer water at SS141, the point nearest to Area 1 and at SS142A, the next down-gradient location. TCE was not detected in the sewer water at SS147, the sample location furthest down-gradient. TCE was detected in the sewer vapor at all locations during the first sampling event at concentrations varying by orders of magnitude, with no apparent correlation to sewer water TCE concentrations. Similar trends were observed for other COCs. Due to this apparent lack of correlation between sewer vapor and sewer water concentrations, it was

concluded that elevated sewer vapor concentrations were more likely due to localized residual soil contamination. Since sewer water was determined to not be the principle source of sewer vapor contamination, only sewer air was sampled in subsequent sampling events.

Additional characterization of contamination in the sanitary sewer included sampling of six sewer manholes in October and November 2020. Based on the results of the sewer manhole sampling, it was determined that passive air sampling would provide a better representation of sewer air conditions. Passive sampling was conducted in January and March 2021. Results of the initial sanitary sewer sampling in June 2020, and the passive sanitary sewer sampling in January and March 2021 are summarized in Appendix C Table 10.

To further assess sanitary sewer conditions and map sewer lateral locations, a video survey of the sanitary sewer was completed in July 2020. In November of 2021, the RP installed cured-in-place piping (CIPP) along the sewer main at Main Street from Elm Street to Brooks Street. A small section of CIPP, about 400 feet in length, was also installed along Brooks Street. The CIPP was to prevent further TCE migration from the sewers into the surrounding buildings.

### **Soil Sampling**

MRAC completed Supplemental Data Collection (SDC) in 2016 to evaluate the effect of 2012 remedial activities in Area 1 (Figure 19) and to refine groundwater plume boundaries to support the establishment of the scope of the area to be included in vapor intrusion investigation activities. MRAC collected thirteen soil borings in Area 1 as part of the SDC. The soil samples documented that soil treatment activities conducted in December 2012 successfully reduced TCE concentrations across the majority of Area 1. A summary of soil sampling data related to the SDC is provided in Appendix C Table 13. MRAC installed and sampled eleven temporary monitoring wells (Figure 17) in 2016 along Brooks Street, Main Street and Highway 60. TCE was detected in five of the eleven and *cis*-1,2-DCE was detected in four of the eleven temporary monitoring wells during the initial October sampling event all below reporting limits. None of those wells had detections in the follow-up November confirmation-sampling event. The temporary monitoring well sample data (Appendix C Table 8) assisted with refining the vapor intrusion investigation area.

Following the sale of land and removal of the former building located on the northern portion of the site in 2017, additional soil sampling was conducted to more completely characterize the former building footprint. Eleven soil borings were collected within the former building footprint as shown in Figure 18, resulting in 33 soil samples and 4 field duplicates collected and analyzed. No COCs were detected above reporting limits, demonstrating that residual soil contamination within this area is unlikely. A summary of soil sampling data from the former building footprint is provided in Appendix C Table 14.

### **Groundwater**

MRAC has conducted groundwater monitoring as part of the Force Majeure Supplemental Sampling Events. There have been seven sampling events (FMSSE 18-24) conducted during the sixth FYR period. A summary table of groundwater TCE concentrations observed in FMSSE data can be found in Appendix C Table 16. TCE concentrations have notably decreased in the UFSB and SBR wells following the June-July 2020 Area 1 pilot program injections. Concentrations of degradation products have increased in some wells, but decreased overall. No notable changes to the DBR have occurred with DBR sample results staying consistent with historical data. Post-injection monitoring will continue through spring 2022. A summary of post-injection monitoring data is provided in Appendix C Table 6.

Robert Spring (Figure 13) is identified as the primary ecological risk present at or near the site. Historically Robert Spring has not shown detections of COCs, but is shown to be hydraulically connected to the site (Figure 8). Sampling from 2016 to 2019 has maintained no detections of COCs at the spring. A summary of Robert Spring sample results in this FYR period is provided in Appendix C Table 7.

Following the 2011 fire, pump and treatment was largely ceased, but SSC-31 continues to be pumped and discharged to the POTW. TCE concentrations discharged to the POTW must remain below 200 µg/L. TCE concentrations in sewer discharge samples in this FYR period are summarized in Appendix C Table 9. The total volume of water pumped from SSC31 in this FYR period is approximately 7,390,423 gallons.

A summary of all groundwater sampling data, including selected information provided in this data review, is provided in Appendix C Tables 1-5.

### **Other Activities**

Following the 2017 removal of the former building foundation, a ground penetrating radar survey was conducted to evaluate if a basement was present under the building. No evidence of a basement was detected.

An electrical resistivity imaging (ERI) survey was conducted in 2021 to evaluate the location of potential fractures or karst features within the limestone bedrock southeast of the Site. Due to interference caused by utilities on the site, the error associated with the survey is just below acceptable limits. The survey identified a possible soil filled fracture in the Mill Street profile, but did not identify any similar features in the Brooks Alley profile. The ERI survey recommends additional drilling to confirm suspected features and interpretation.

### **Site Inspection**

The Department conducted a Site inspection on 12/14/2021. In attendance were TJ Graven, MoDNR and Anthony Moore, Environmental Works Incorporated, the RPs consultant. The purpose of the inspection was to assess the protectiveness of the remedy. The Site inspection checklist and pictures can be found in Appendix E.

Overall, the site inspection showed that the site is in a good state of repair and is being adequately maintained. The site inspection identified a sign missing on the north side of the fenced area of the site. The RP will replace the missing sign. The site inspection showed that the southern parcel of land was being used as a staging area for dumpsters and equipment related to utility line repairs, and that a former daycare facility north of the site is being renovated into a dog kennel.

## **V. TECHNICAL ASSESSMENT**

### **QUESTION A:** Is the remedy functioning as intended by the decision documents?

No, the remedy is not functioning as intended. A fire destroyed the groundwater treatment system in 2011 and since that time, the Site has been being addressed under a FM/ED Agreement. The SSC-31 well is the only remaining operational extraction well for the Site since the December 2011 fire. Due to its distance from the site, the extracted groundwater from SSC-31 discharges directly into Republic's sewer system. SSC-26 and SSC-27 (monitoring wells) are grouped with SSC-31 (extraction well) and are the furthest downgradient UFSB wells (Figure 17). These three wells form the UFSB sentinel cluster and verify the operational status of the remedial action. Based on the operational data obtained during this FYR, TCE concentrations were highest in these wells in 2017 (SSC-26 (23.2 µg/l), SSC-27 (3.7 µg/l), and SSC-31 (17.8 µg/l)); however, by 2020, all three of these wells were below MCLs indicating a decreasing TCE trend (Figure 41) in these wells.

Under the FM/ED agreement groundwater sampling continues to assess the nature and extent of the groundwater plume in the three distinct water bearing units and determines what activities need to be conducted to achieve groundwater RAOs. Below is a summary of the sampling data from the last five years for each of the three groundwater bearing units.

### **UFSB**

Within the UNC portion of the UFSB (Figures 26-27), the highest TCE concentrations from 2016-2019 were reported in SSC-156 (226,000 µg/L to 24,600 µg/L). During the October 2020 sampling event (FMSSE-24)

following the June-July 2020 injection activities, TCE decreased to non-detect. Within the FSB portion of the UFSB (Figures 28-29), the highest TCE concentrations from 2016-2019 were reported in SSC-6C-R1 and SSC-29-R3. During the October 2020 sampling event (FMSSE-24), TCE decreased at R3 from 9,240 µg/L to 267 µg/L, but increased at the other three zones to concentrations near 1,500 µg/L. COC concentrations in the north portion of the UFSB has varied greatly over the past five years with no definitive trend identified (Figures 30-35). Within the Middle Portion, COCs concentrations within the FSB portion of the UFSB (SSC-24) and outside the treatment area (SSC-18) remained relatively consistent during the reporting period (Figures 37-39). At SSC-23, east of Main Street, TCE concentrations have stabilized near 3.0 µg/L. Within the South Portion, COC concentrations have varied seasonally, but have generally remained consistent or decreased during the reporting period (Figures 40-41). The 2012 FYR identified 1,4-dioxane as a potential COC. Sampling results for 1,4-dioxane indicate concentrations above the USEPA screening level are limited to the fenced area of the Site (SSC-11, SSC-29, and SSC-6C). No COCs have ever been detected at Robert Spring.

### **SBR**

TCE concentrations at REM-2 (Figure 42) have generally been near 2,000 to 3,000 µg/L since the 2011 fire, prior to decreasing to 33.5 µg/L in October 2020 following the June-July 2020 injection activities. TCE concentrations in SSC-6C (Figure 42) decreased following the 2011 fire and then generally stabilized at concentrations around 4,000 µg/L. TCE concentrations in the Waterloo well intervals monitoring the SBR are significantly lower than the concentrations observed in the overlying UFSB intervals and have decreased with depth. TCE was not detected in any of the Waterloo intervals within the SBR at SSC-3A. With regards to 1,4-dioxane it was only detected within the fenced area at REM-2 and SSC-6C. Based on the data collected to date, COCs within the SBR are limited to the area in the vicinity of the former SSC operations, with the exception of two detections of *c*-DCE at SSC-3A (255 ft bmp) near the laboratory reporting limit.

### **DBR**

Increases in COC concentrations were initially observed at REM-1 following pumping cessation but have stabilized near 5-7 µg/L (Figure 43). No other COCs have been detected at SSC-3B, including 1,4-dioxane. No other VOCs have been detected in the DBR sentinel monitoring wells. Two new DBR wells will be installed as part of the FFS scope, to provide further confidence in delineation of COCs in the DBR.

Pilot projects in Areas 1, 2, and 3 (Figure 9) continue to be conducted to address residual soil contamination and results will be used in the pending FFS. Within the treatment zone of Area 1, COC concentrations have decreased following the June-July 2020 injection activities. Outside the treatment zone within Area 1, no COCs have been reported, consistent with historical results. Within Area 2, COCs have decreased following the October 2015 injection activities.

**QUESTION B:** Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

At the time of writing this Five Year Review, the protectiveness determination of the remedy is currently being deferred and will be reevaluated once additional data is obtained in the upcoming FFS and the included HHRA which is planned to be completed by 2025. The vapor intrusion exposure pathway is currently being evaluated with several new residences being sampled in the coming year. There is no direct exposure to contaminated groundwater or to the contaminated soil source areas.

### **Changes in Standards and To Be Considered (TBCs)**

The Agencies are not aware of any newly promulgated standards that would call into question the protectiveness of the original remedy.

The chemical-specific ARARs for groundwater were identified in Appendix A of the 1989 ROD and included: Federal 40 CFR 141 (safe drinking water standards, MCLs), Missouri 10 CSR 60-4 (drinking water standards), Missouri 10 CSR 20-7 (water quality standards), and Federal ambient water quality standards for aquatic life



protection. The following table shows a comparison of the federal MCLs used at the time of the 1989 ROD to current MCLs used as compliance levels presently. There have only been a few changes to MCLs, including the addition of cis-1,2-DCE which was not on the original list, and a change in the trans-1,2-DCE from the previous 70 mg/L (MCLG) to the current MCL of 100 mg/L. The MCL for TCE has not changed as of the date of this FYR.

**Table 6: 1989 ROD cleanup levels compared to current MCLs**

<b>COCs Identified in 1989 ROD</b>	<b>1989 ROD Cleanup Levels (µg/L)</b>	<b>Current MCLs (µg/L)</b>
1,1-Dichloroethane	5 (proposed MCL)	NA
1,1-Dichloroethene	7	7
cis-1,2- Dichloroethene	Not included in original COC list	70
trans-1,2- Dichloroethene	70 (MCLG)	100
Methylene Chloride	NA	5
1,1,1-Trichloroethane	200	200
Trichloroethylene	5	5
Vinyl Chloride	2	2

ROD = Record of Decision, MCL = Maximum Contaminant Levels, COC = Contaminant(s) of Concern  
µg/L = micrograms per liter

### **Changes in Toxicity and Other Contaminant Characteristics**

During this FYR period, the Agencies are not aware of other changes to contaminant characteristics. Several toxicity values have changed since the baseline HHRA was conducted in 1989. Most notably, a revised toxicological review for TCE completed in 2011 characterized TCE as “carcinogenic to humans” by all routes of exposure and significantly revised its carcinogenic and non-carcinogenic toxicity values. As part of the upcoming FFS, a revised HHRA will be completed utilizing current toxicity values.

### **Changes in Risk Assessment Methods**

The HHRA conducted in 1989 and included as part of the RI/FS determined that no unacceptable health risks were currently present since the UFSB and SBR were not used as a source of drinking water and CW-1 (DBR) had been removed from service. However, the HHRA concluded that future use of on-site and off-site groundwater from any of the three aquifers could pose unacceptable health risks.

The HHRA was conducted using the Superfund Public Health Evaluation Manual (SPHEM) (EPA 1986), while current practice is to use EPA's Risk Assessment Guidance for Superfund (RAGS) methodology. While much of the methodology has changed over the years, the most significant is that the process for selecting chemicals to be evaluated in the HHRA was modified. Selection of "indicator chemicals" under the old guidance potentially allowed for more chemicals to be eliminated than would be eliminated using current methodology as described in RAGS for selecting "chemicals of potential concern."

A variety of other risk assessment methodologies have changed, such as the standardized methodologies for dermal and inhalation risk assessment along with a variety of changes to standard default exposure parameters. As part of the upcoming FFS, a revised HHRA will be completed utilizing current risk assessment methods.

### **Changes in Exposure Pathways**

No land use changes occurred in this FYR period. Recently, redevelopment of the Southern Parcel (Figure 2) has come to the Agencies' attention. The parcel was purchased by a property management LLC that intends to use the parcel as a recreational vehicle storage site. The Agencies are aware of other queries into redevelopment of other parcels however, the Southern Parcel is the only one possible in the foreseeable future. As of the writing of this document, the parcel is presently vacant.

While indoor air data is currently limited, vapor intrusion investigations determined that a complete vapor intrusion pathway exists for at least one residential property in the area. There is possibly vapor intrusion into other properties in the vicinity. After a community outreach campaign on October 13th and 14th of 2021, led by the MoDNR and the MDHSS, many more property owners signed access agreements for vapor intrusion sampling. The Agencies will have a greater understanding of the extent of the vapor intrusion issue once sampling data for these properties is available.

Elevated levels of TCE found in sewer mains show that these utility lines serve as preferential pathways for TCE migration into buildings along Main Street and Brooks Street. In November of 2021, the responsible party installed cured-in-place piping (CIPP) along the sewer main at Main Street from Elm Street to Brooks Street. A small section of CIPP, about 400 feet in length, was also installed along Brooks Street. The CIPP was to prevent further TCE migration from the sewers into the surrounding buildings.

Ecological risk at the site is limited to potential impacts to Robert Spring and Shuyler Creek. However, monitoring data from the spring has never found no detections of site-related COCs (Table 7) indicating limited ecological risk from groundwater interactions with surface water.

**QUESTION C:** Has any **other** information come to light that could call into question the protectiveness of the remedy?

To the best of our knowledge, during the FYR period no impacts from climate change have occurred that affect the protectiveness of the remedy. Potentially, future increases in precipitation could increase or elevate groundwater levels to contact impacted vadose zone soils or affect transport of impacted groundwater.

## VI. ISSUES/RECOMMENDATIONS

Issues/Recommendations				
OU(s): Sitewide/OU1	<b>Issue Category: Changed Site Conditions</b>			
	<b>Issue:</b> Delineate horizontal and vertical limits of UFSB and DBR plumes			
	<b>Recommendation:</b> An additional well (SSC-195) will be installed southeast of Area 1, to evaluate if contaminants are migrating through the FSB. In the DBR, two additional wells will be installed to address horizontal delineation in 2022.			
Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	Yes	PRP	EPA/State	10/31/2024
OU(s): Sitewide/OU1	<b>Issue Category: Institutional Controls</b>			
	<b>Issue:</b> Implement additional institutional controls (ICs).			
	<b>Recommendation:</b> Implement additional ICs by recording an environmental covenant (EC) with the SSC property's chain of title.			

Affect Current Protectiveness	Affect Future Protectiveness	Party Responsible	Oversight Party	Milestone Date
No	No	Other	EPA/State	10/31/2024

## VII. PROTECTIVENESS STATEMENT

Protectiveness Statement(s)		
<i>Operable Unit: 1</i>	<i>Protectiveness Determination:</i> Protectiveness Deferred	<i>Planned Addendum Completion Date:</i> 10/31/2025
<p><i>Protectiveness Statement:</i></p> <p>A protectiveness determination of the remedy cannot be made at this time until further information is obtained, under the FM/ED agreement and after associated delineation and pilot study activities are completed. Further data and information will be obtained by taking the following actions: completing a Focused Feasibility Study and an updated Human Health Risk Assessment including a comprehensive vapor intrusion study of all structures overlying and near potentially impacted groundwater, delineating the groundwater plume in all three groundwater units, and evaluating the effectiveness of ongoing soil source area pilot studies. It is expected that these actions will continue through 2025, at which point a protectiveness determination will be made.</p>		

Sitewide Protectiveness Statement	
<i>Protectiveness Determination:</i> Protectiveness Deferred	<i>Planned Addendum Completion Date:</i> 10/31/2025
<p><i>Protectiveness Statement:</i></p> <p>A protectiveness determination of the remedy cannot be made at this time until further information is obtained, under the FM/ED agreement and after associated delineation and pilot study activities are completed. Further data and information will be obtained by taking the following actions: completing a Focused Feasibility Study and an updated Human Health Risk Assessment including a comprehensive vapor intrusion study of all structures overlying and near potentially impacted groundwater, delineating the groundwater plume in all three groundwater units, and evaluating the effectiveness of ongoing soil source area pilot studies. It is expected that these actions will continue through 2025, at which time a protectiveness determination will be made.</p>	

## VIII. NEXT REVIEW

The next five-year review report for the Solid State Circuits Superfund Site is required five years from the completion date of this review.



## FIGURES



CITY WELL #6  
WASHINGTON & FR 103  
BROOKLINE, MISSOURI  
(3.65 MILES NE OF CITY WELL #3)

CITY WELL #3

ELM STREET

HIGHWAY 60

ABANDONED  
CITY WELL #2

ABANDONED  
CITY WELL #1

CAVE WELL

SOLID STATE  
CIRCUITS SITE

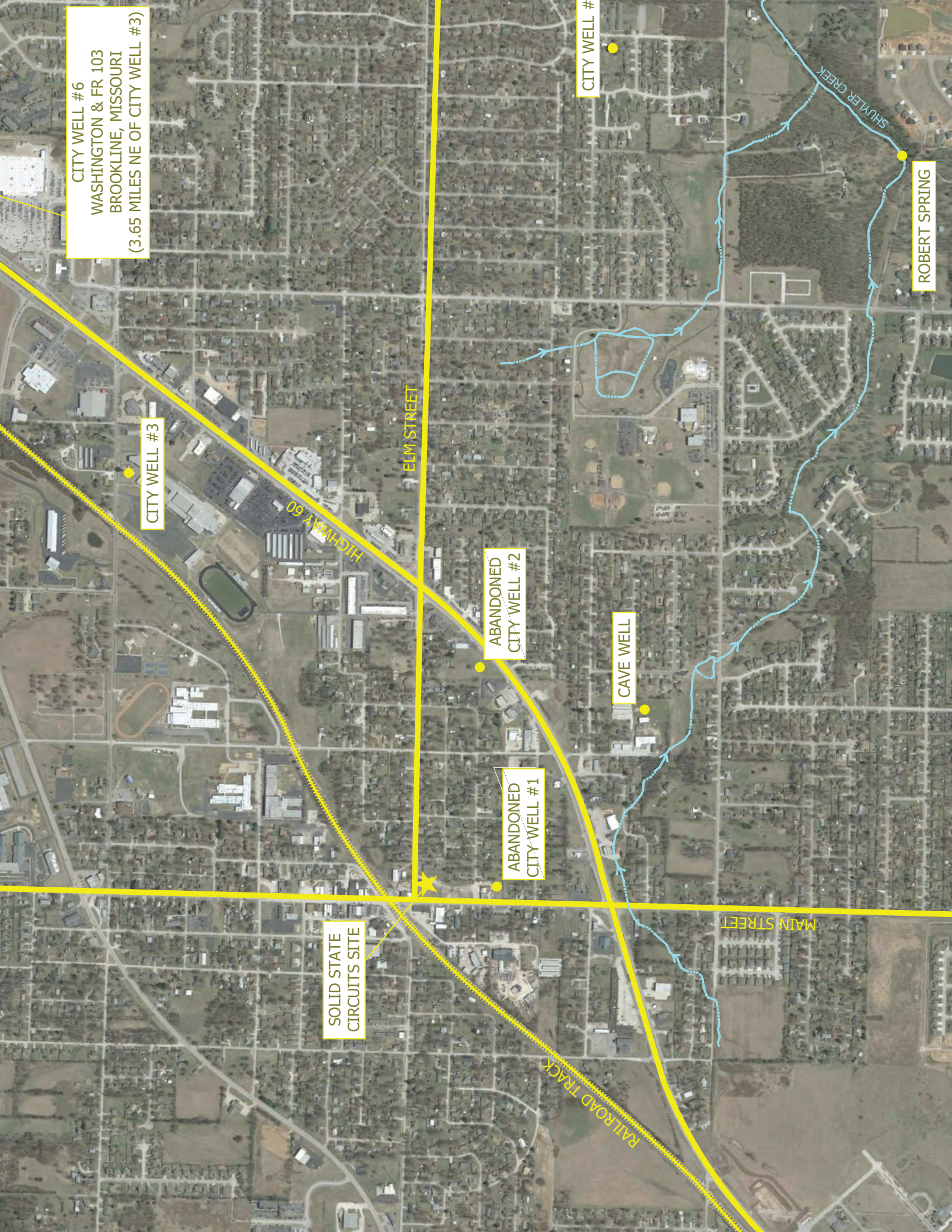
RAILROAD TRACK

MAIN STREET

CITY WELL #

SHUYLER CREEK

ROBERT SPRING







MAIN STREET

MILL STREET





ELM STREET

MAIN STREET

BROOKS ALLEY

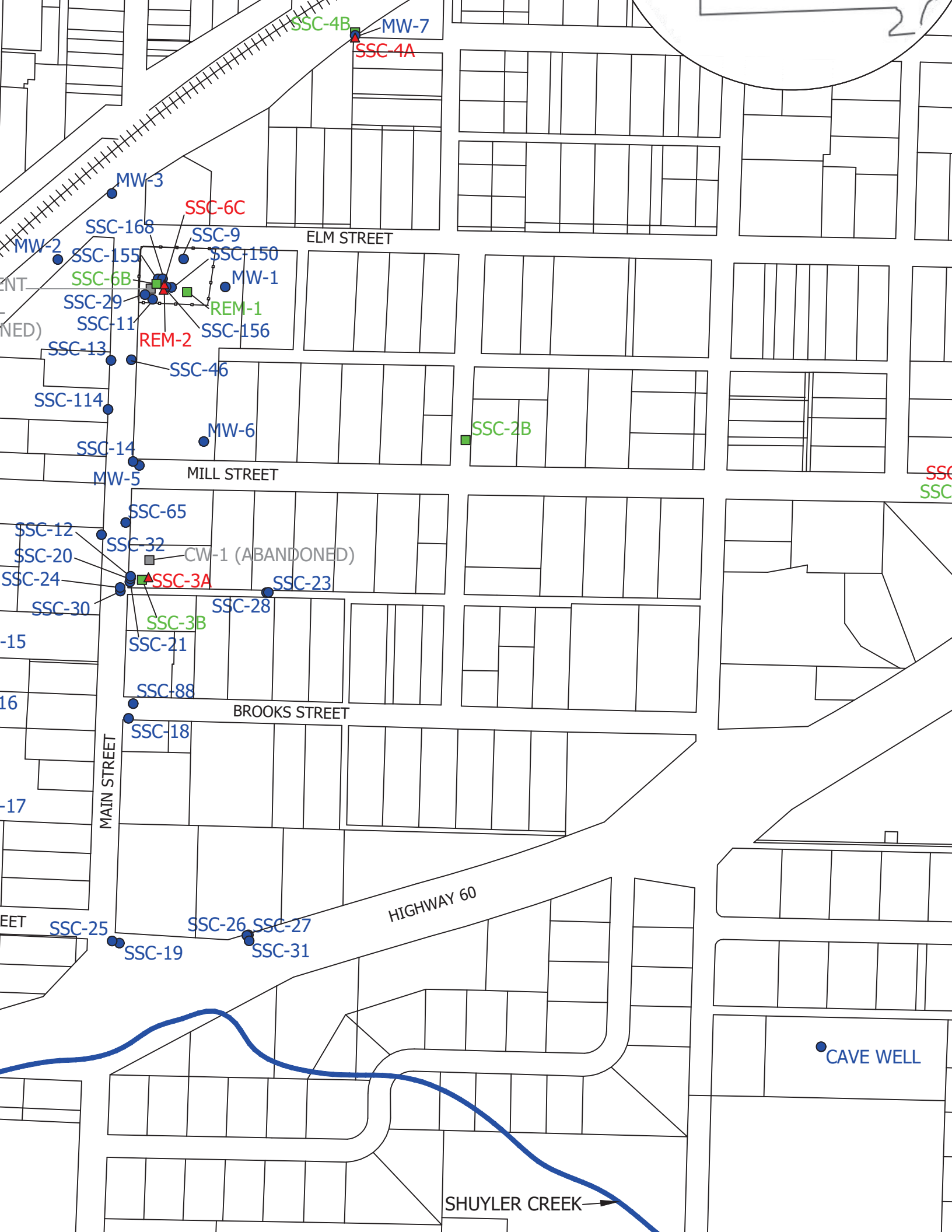
S MAPLE AVENUE

MILL STREET

BROOKS STREET

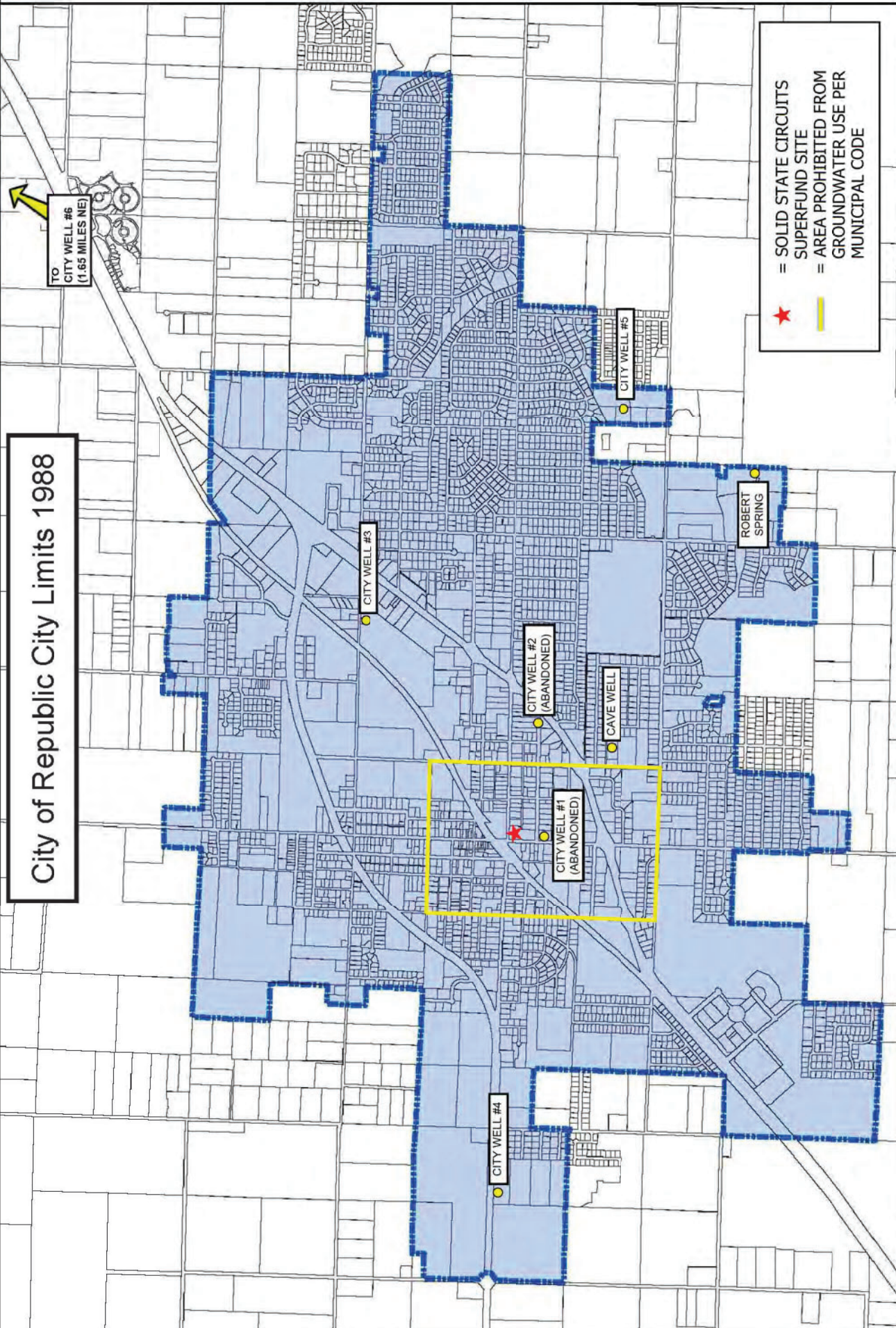
60

AVENUE

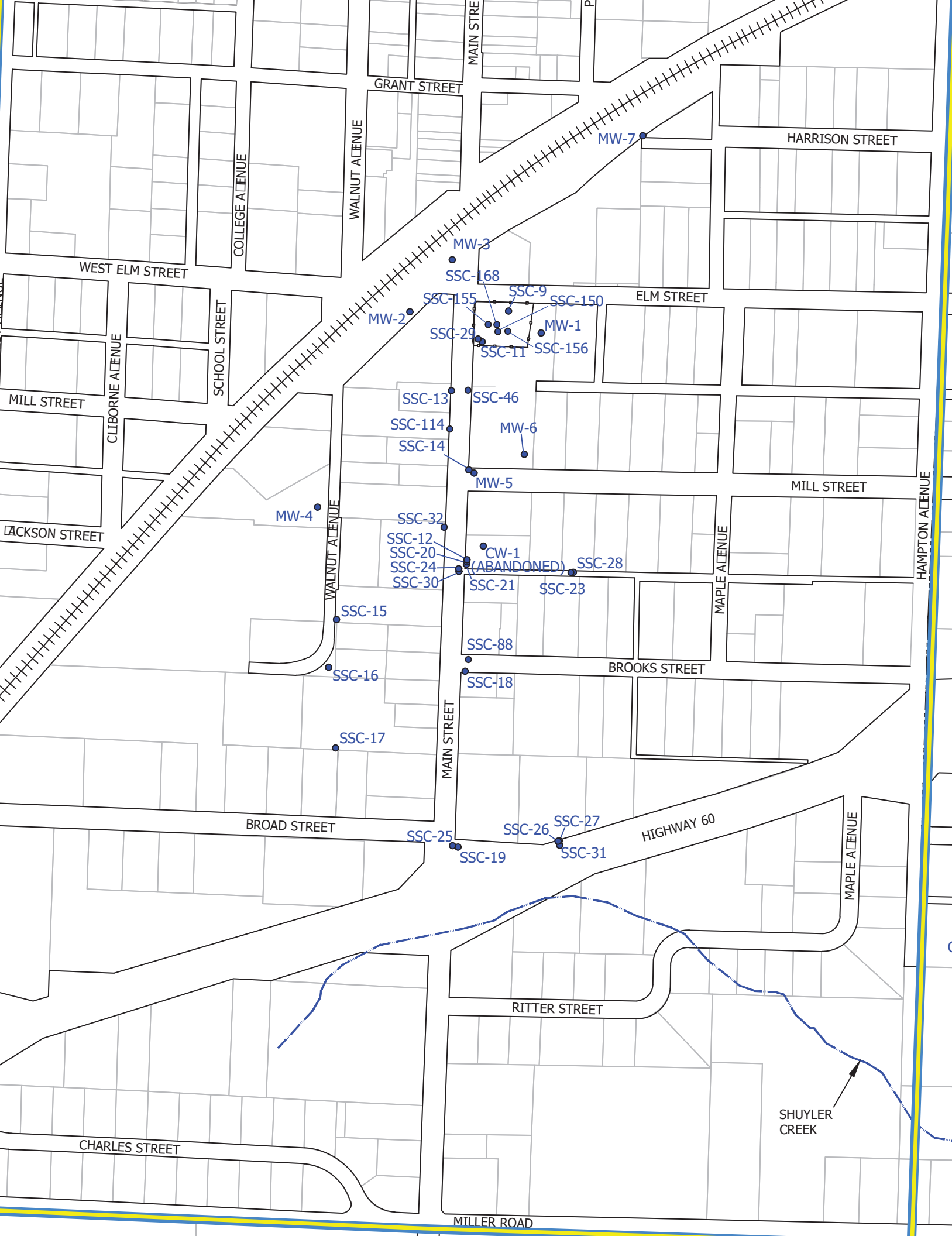




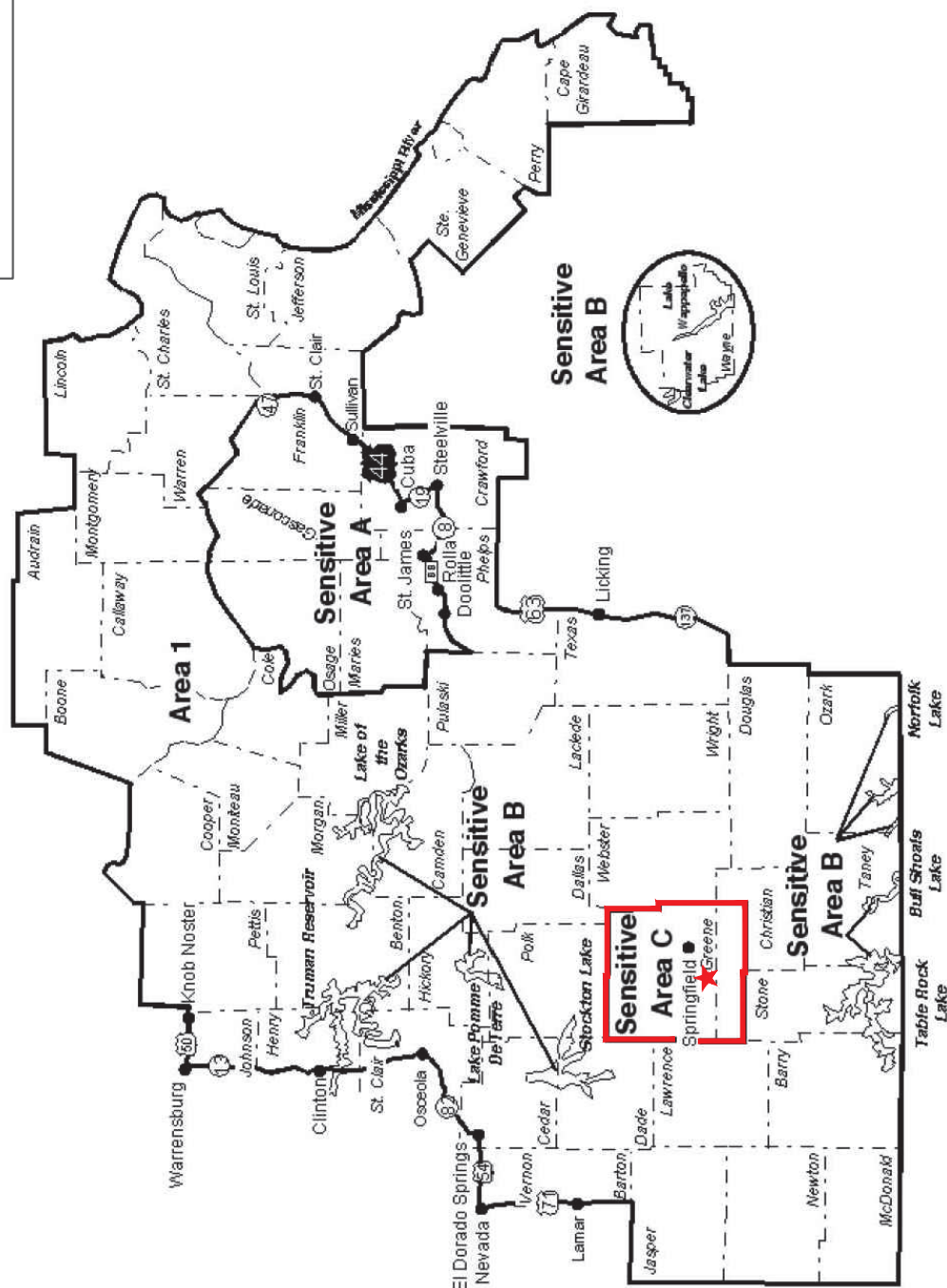
# City of Republic City Limits 1988



	CHECKED BY: M. KENWORTHY	NOT-TO-SCALE		Springfield Office Location: 1455 E. Chestnut Expressway Springfield, MO 65802 Phone: (417) 890-9500	CITY OF REPUBLIC 1988 CORPORATE LIMITS	FIGURE <b>5</b>
	E.W.I. # 60185 DRAWN BY: MEK SEPT. 26, 2008			SOLID STATE CIRCUITS, INC. SUPERFUND SITE REPUBLIC, MISSOURI		







NORTH



CHECKED BY:  
ADM

E.W.I. # 60185  
DRAWN BY: MEK  
MAY 12, 2009

NOT-TO-SCALE



Springfield Office Location:  
1455 E. Chestnut Expressway  
Springfield, MO 65802  
Phone: (417) 890-9500

DRILL AREA 9  
(FORMALLY SENSITIVE AREA C)

SOLID STATE CIRCUITS, INC. SUPERFUND SITE  
REPUBLIC, MISSOURI

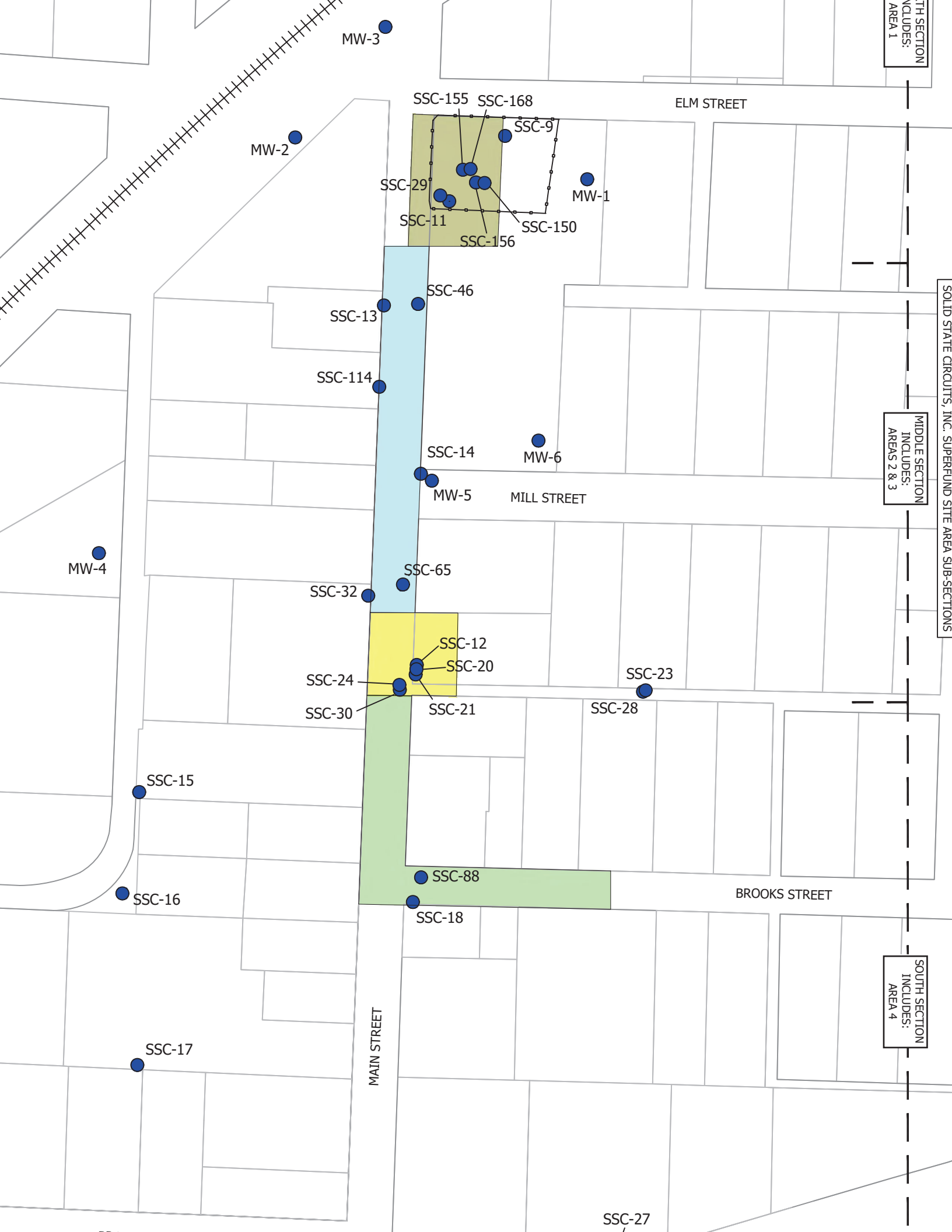
FIGURE

△

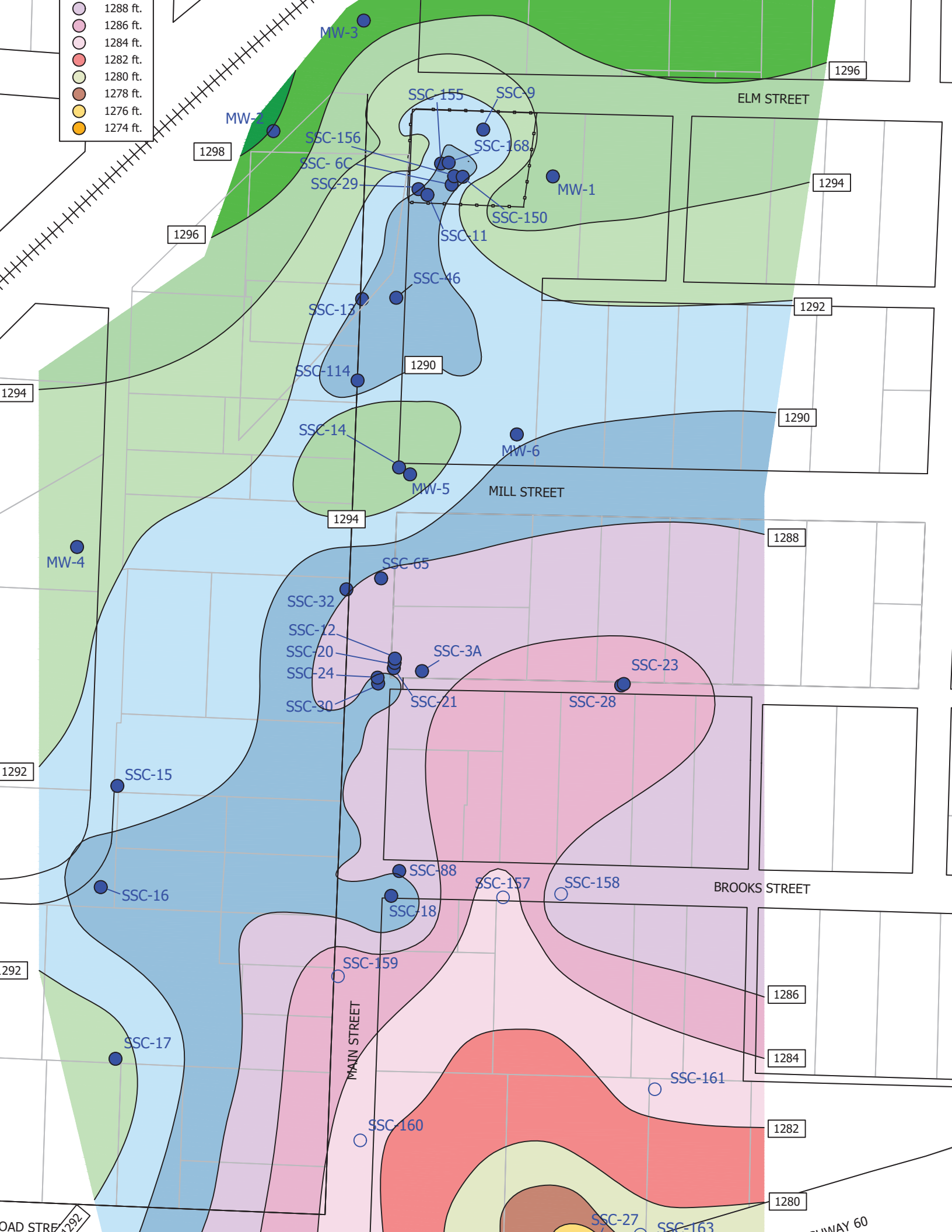
GREENE/CHRISTIAN COUNTY  
WELL REGULATION

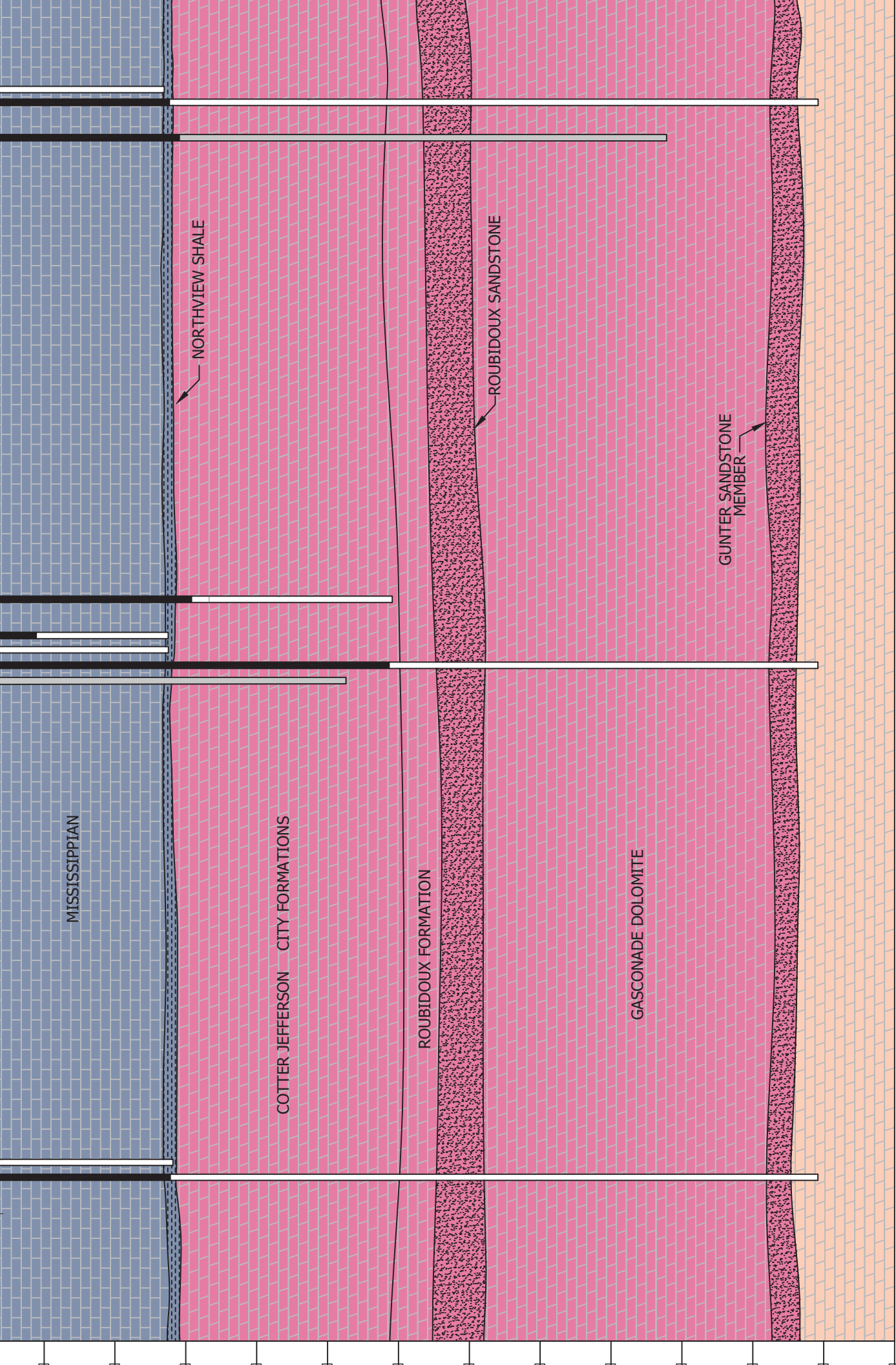












STONE

E  
RIES)

OLomite

UPPER CAMBRIAN DOLOMITE  
(CROIXIAN SERIES)

QUATERNARY DEPOSITS

WELL CASING

OPEN BOREHOLE

SEALED BOREHOLE

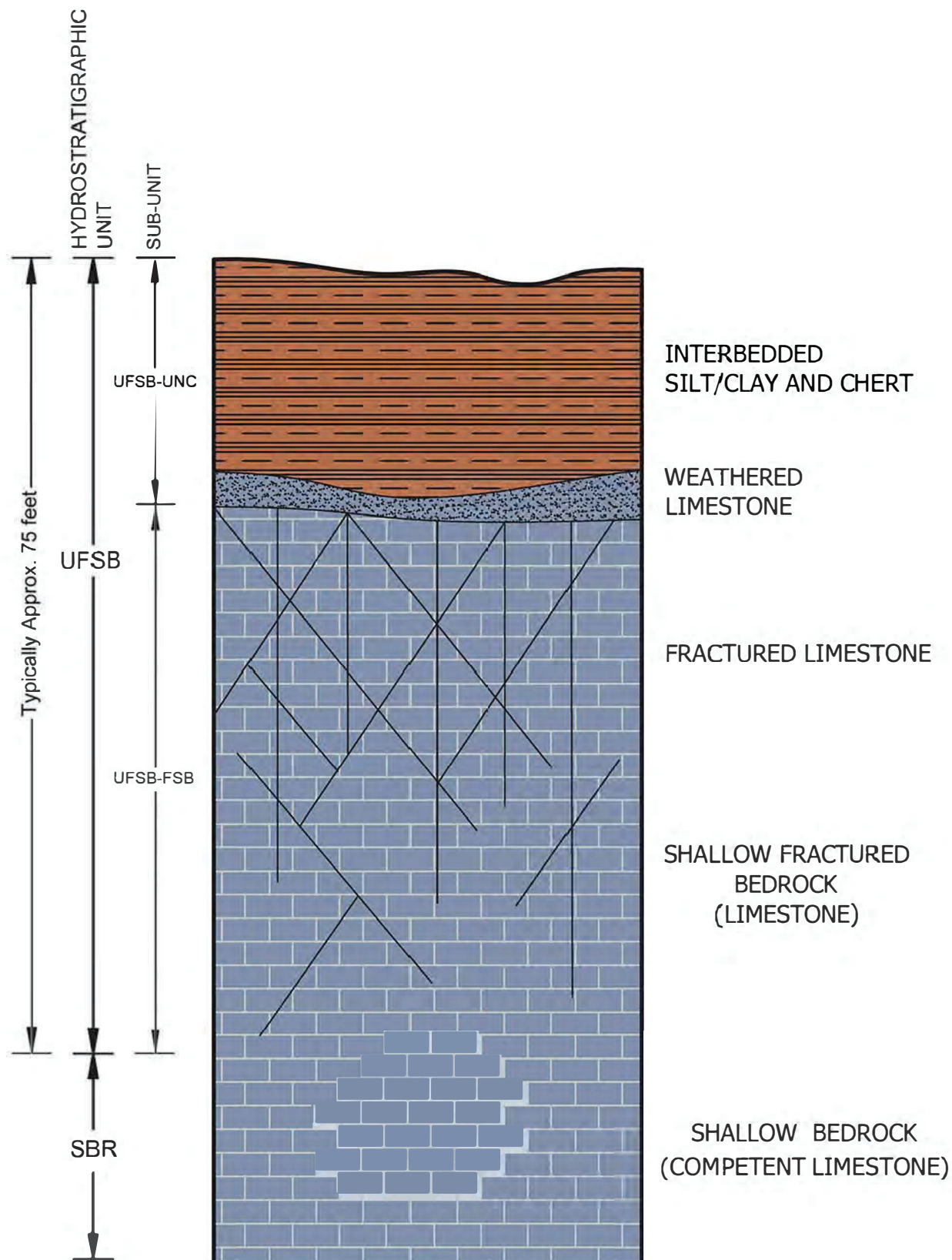
CHECKED BY:  
A. MOORE

PREPARED BY:  
A. MOORE

SITE HYD

SCALE (FEET)

0 175 3



CHECKED BY:  
A. MOORE

E.W.I. # 60185  
DRAWN BY: CLM  
Sep. 16, 2016

NOT TO SCALE

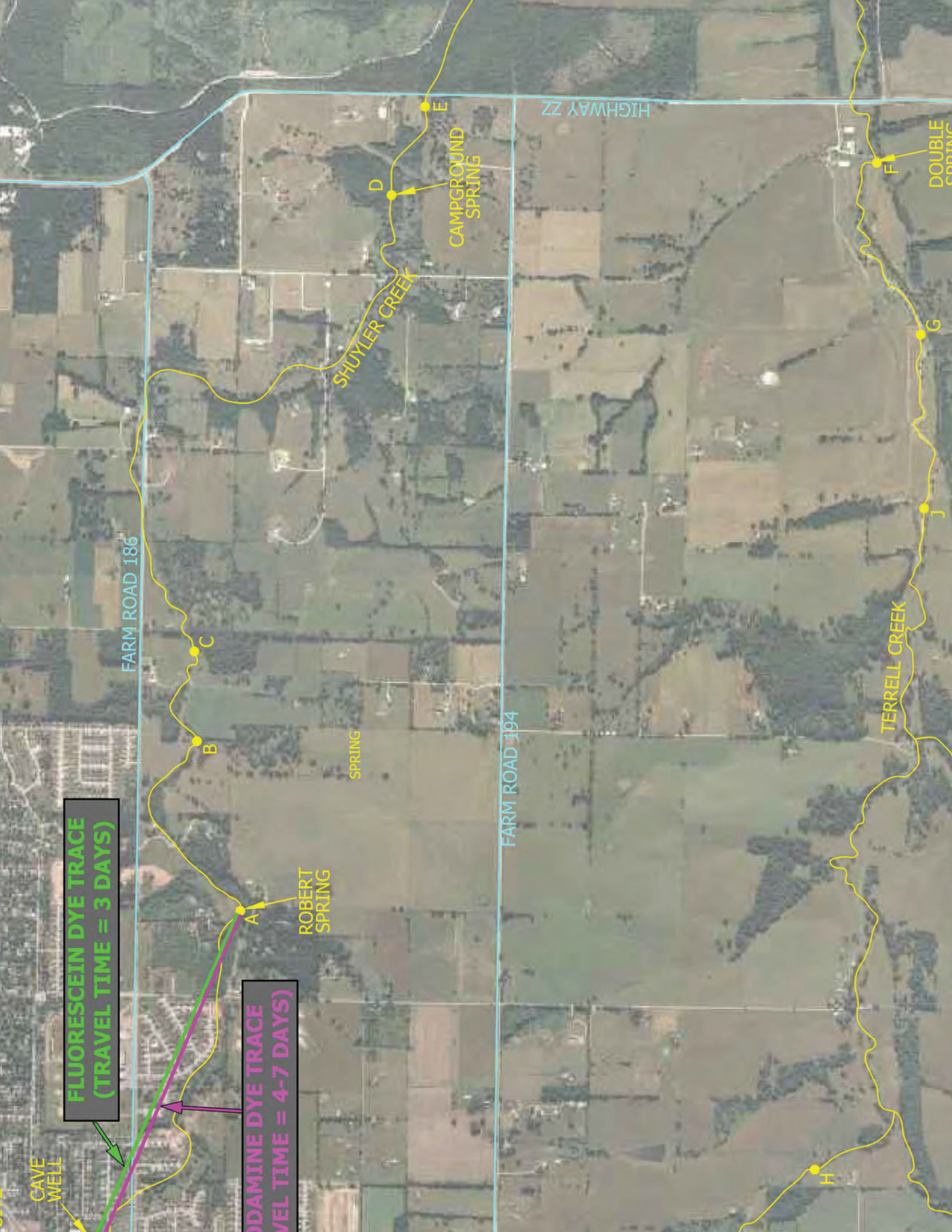


UFSB AND SBR CONCEPTUAL MODEL

SOLID STATE CIRCUITS, INC. SUPERFUND SITE  
REPUBLIC, MISSOURI

FIGURE  
12





FLUORESCCEIN DYE TRACE  
(TRAVEL TIME = 3 DAYS)

RHODAMINE DYE TRACE  
(TRAVEL TIME = 4-7 DAYS)

CAVE  
WELL

FARM ROAD 186

FARM ROAD 194

HIGHWAY 22

SHUYLER CREEK

TERRELL CREEK

DOUBLE  
CREEK

ROBERT  
SPRING

CAMPGROUND  
SPRING

B

C

A

SPRING

D

E

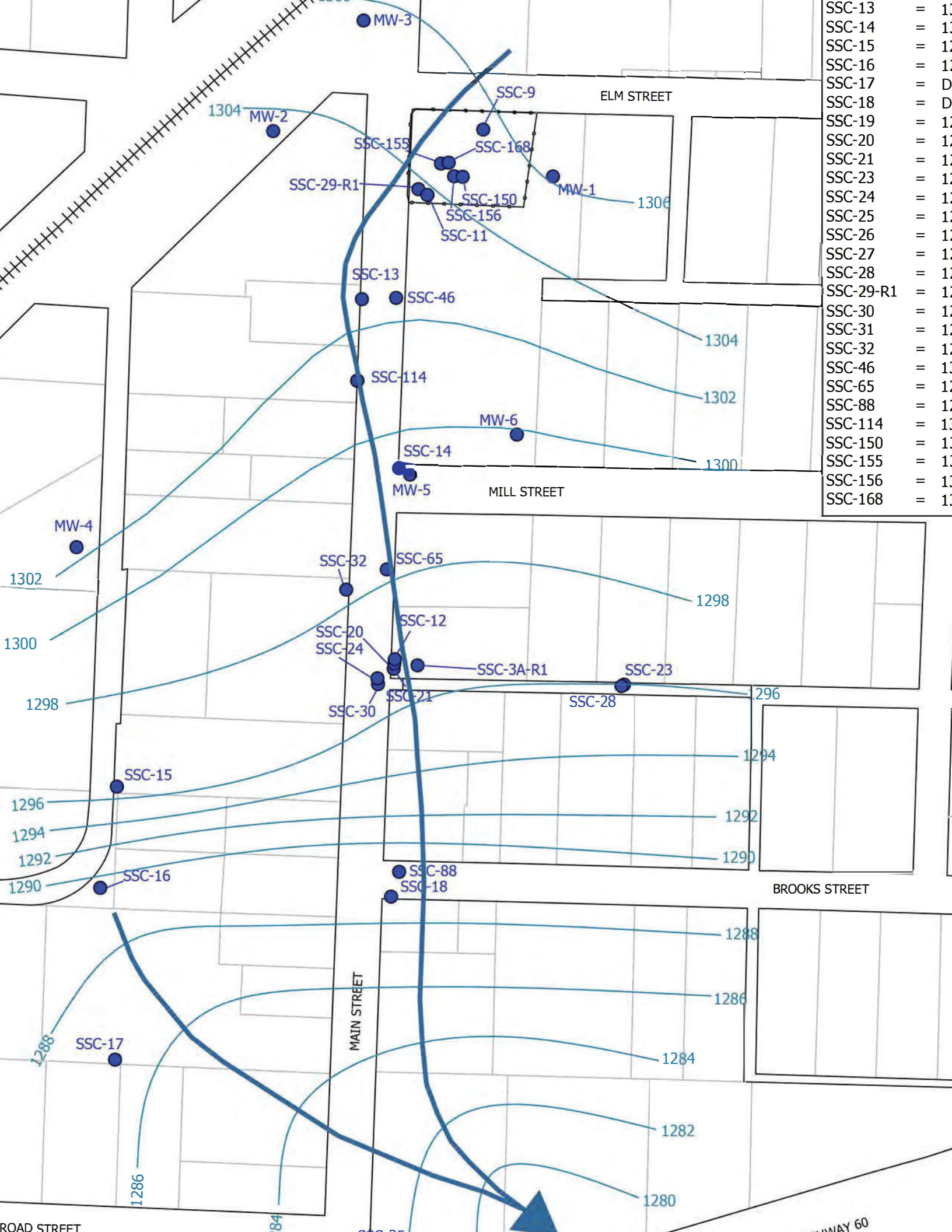
G

F

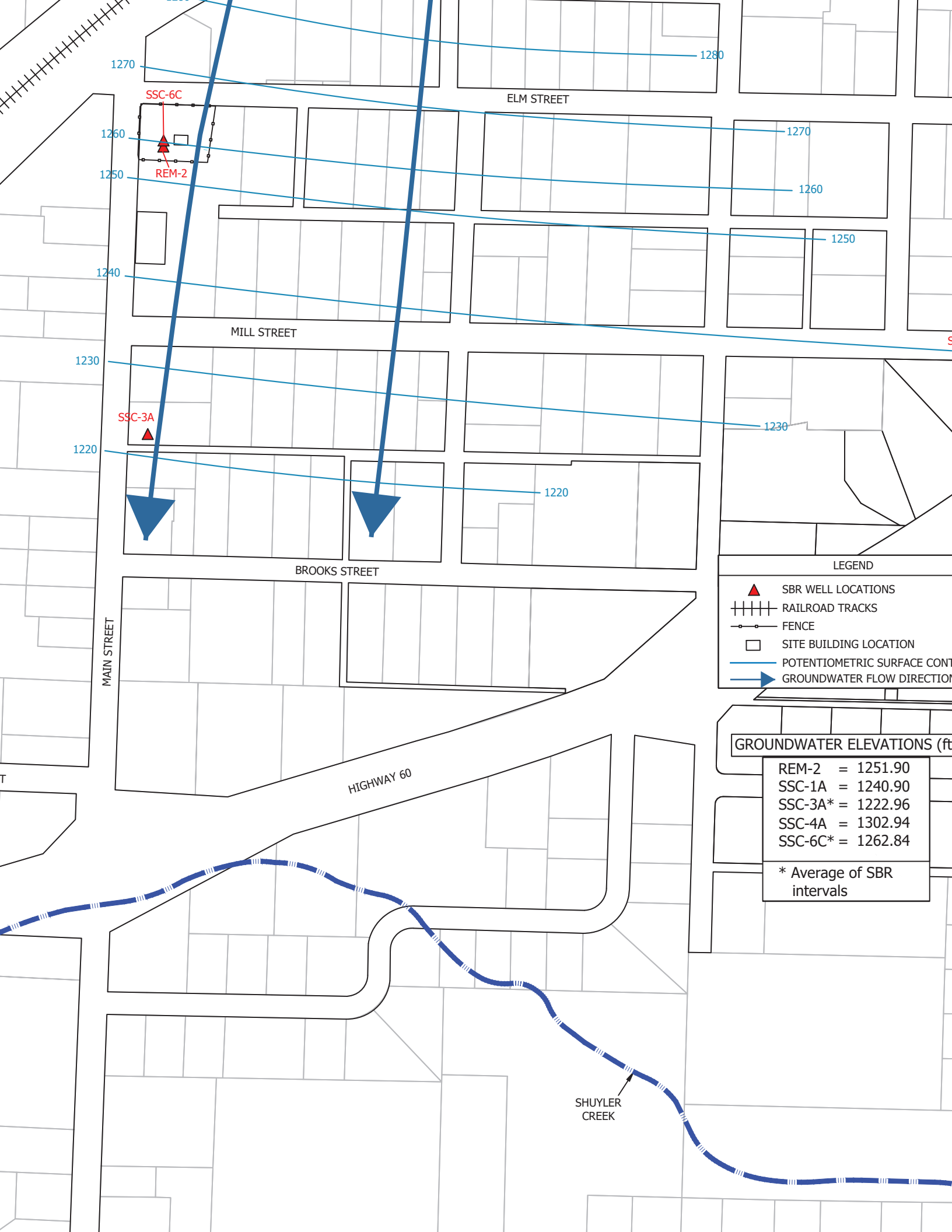
J

H

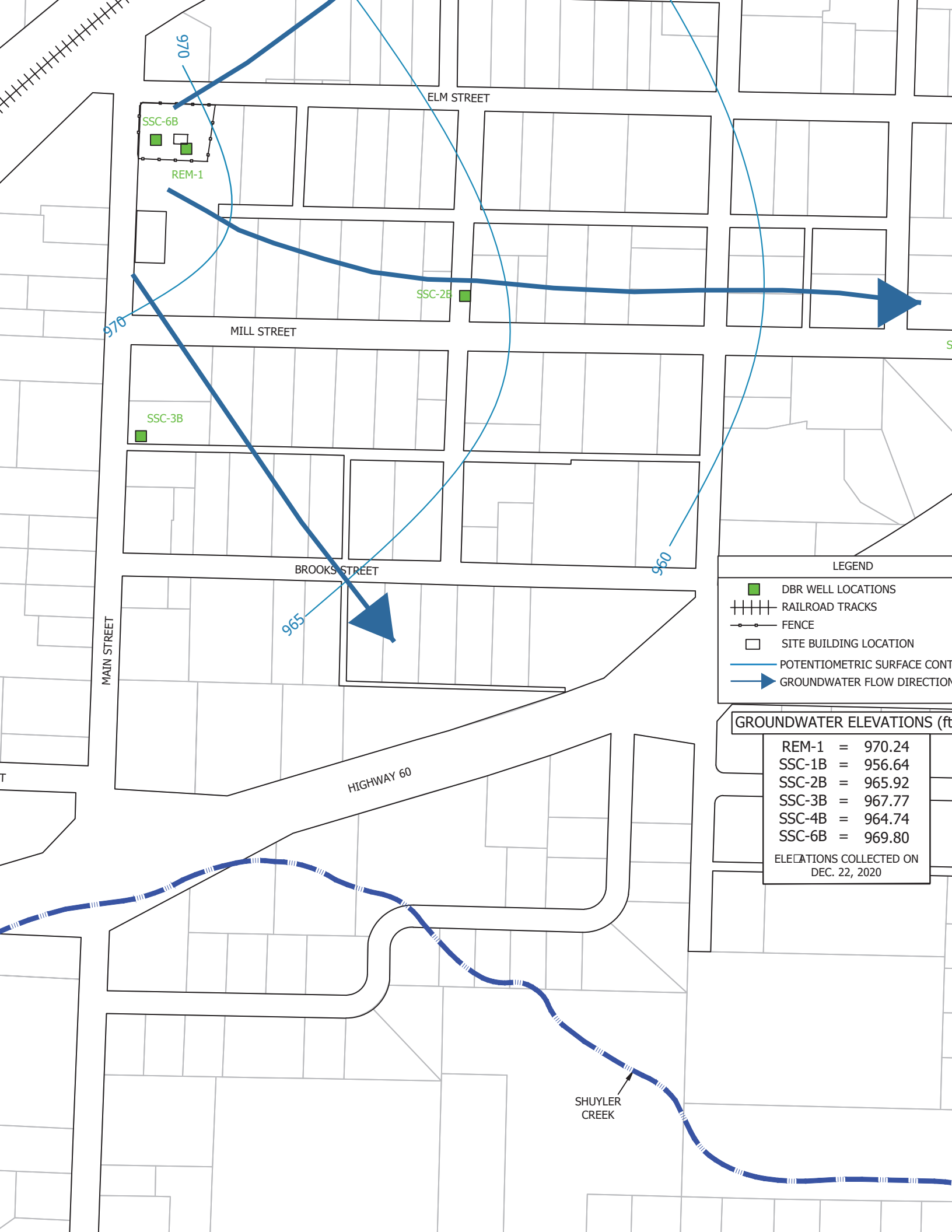


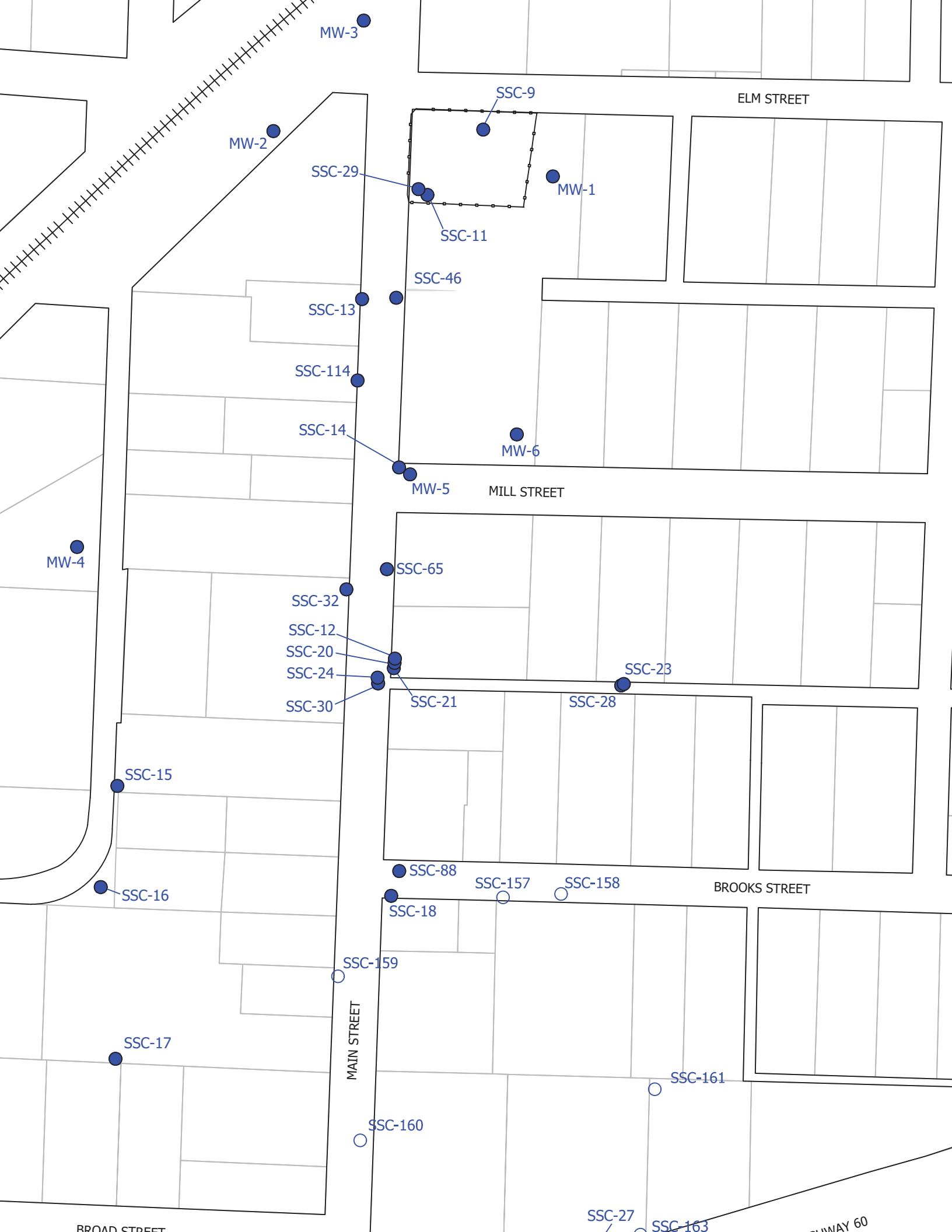


SSC-13	= 1304
SSC-14	= 1302
SSC-15	= 1300
SSC-16	= 1298
SSC-17	= 1296
SSC-18	= 1294
SSC-19	= 1292
SSC-20	= 1290
SSC-21	= 1288
SSC-23	= 1286
SSC-24	= 1284
SSC-25	= 1282
SSC-26	= 1280
SSC-27	= 1278
SSC-28	= 1276
SSC-29-R1	= 1274
SSC-30	= 1272
SSC-31	= 1270
SSC-32	= 1268
SSC-46	= 1266
SSC-65	= 1264
SSC-88	= 1262
SSC-114	= 1260
SSC-150	= 1258
SSC-155	= 1256
SSC-156	= 1254
SSC-168	= 1252









**LEGEND**

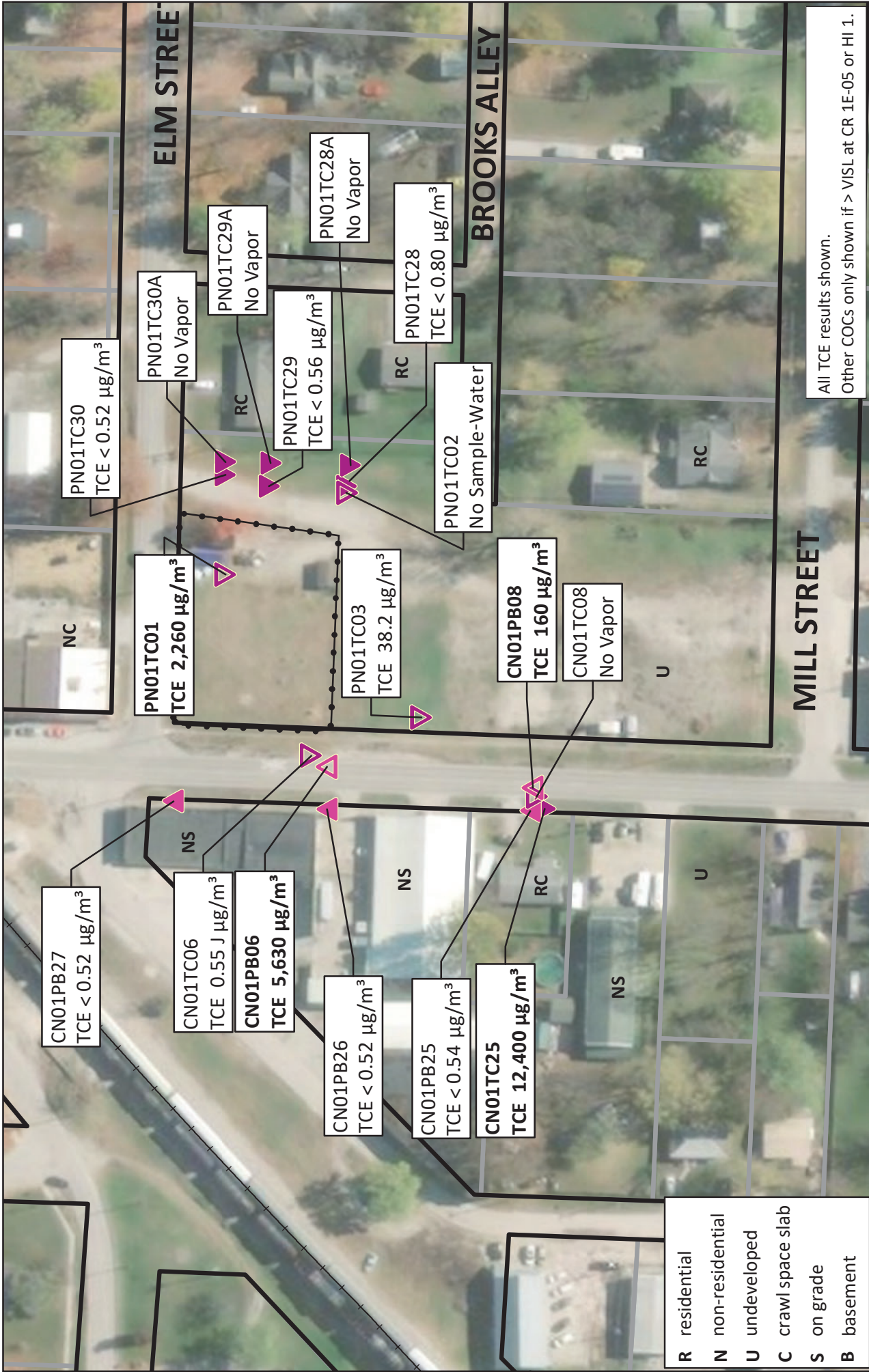
2017 BORING LOCATIONS







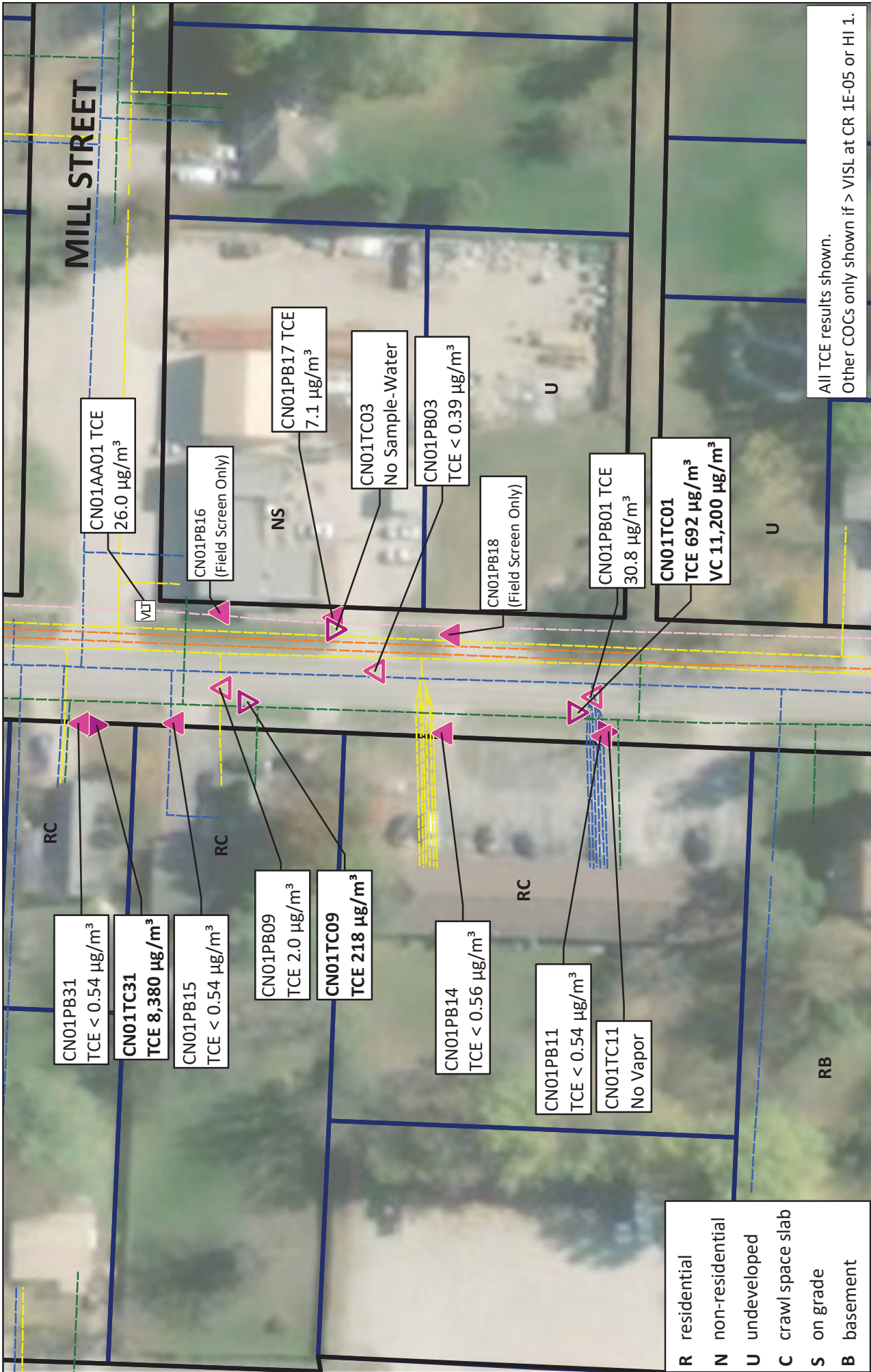
<div>NORTH</div> <div></div>	CHECKED BY: A. MOORE	<div>SCALE</div> <div></div> <div>APPROXIMATE</div>	<div><div>ENVIRONMENTAL WORKS</div></div>	SDC AREA 1 BORINGS AND WELLS	FIGURE 19
	E.W.I. # 60185 DRAWN BY: DH APR 20, 2016			SOLID STATE CIRCUITS, INC. SUPERFUND SITE REPUBLIC, MISSOURI	



All TCE results shown.  
Other COCs only shown if > VISL at CR 1E-05 or HI 1.

<div></div>		<div><div><div>Phase 1 Soil Vapor Probe (GVP) 1.5 feet bls</div><div>Phase 1 Soil Vapor Probe (SVP) 5 feet bls</div><div>Phase 2 Soil Vapor Probe (GVP) 1.5 feet bls</div><div>Phase 2 Soil Vapor Probe (SVP) 5 feet bls</div></div><div><div><div></div>Fence</div><div><div></div>Right of Way</div><div><div></div>Parcel Boundaries</div><div><div></div>Rail Road</div></div><div></div></div>	<div><div><div><b>SOIL GAS SAMPLE RESULTS - ELM ST AREA</b></div><div>SOLID STATE CIRCUITS, INC. SUPERFUND SITE REPUBLIC, MISSOURI</div></div><div><div><div>0</div><div>50</div><div>100</div></div><div>Feet</div><div>1 : 1,250</div></div></div>
<div>Drawn By: SJM</div>			
<div>Checked By: KMC</div>			
<div>Date: 5/5/2020</div>			
<div>Project #: 60614391</div>			





All TCE results shown.  
Other COCs only shown if > VISL at CR 1E-05 or HI 1.

**Drawn By:** SJM  
**Checked By:** KMC  
**Date:** 5/5/2020  
**Project #:** 60614391

Phase 1 Soil Vapor Probe (GVP) 1.5 feet bls  
 Phase 1 Soil Vapor Probe (SVP) 5 feet bls  
 Phase 2 Soil Vapor Probe (GVP) 1.5 feet bls  
 Phase 2 Soil Vapor Probe (SVP) 5 feet bls

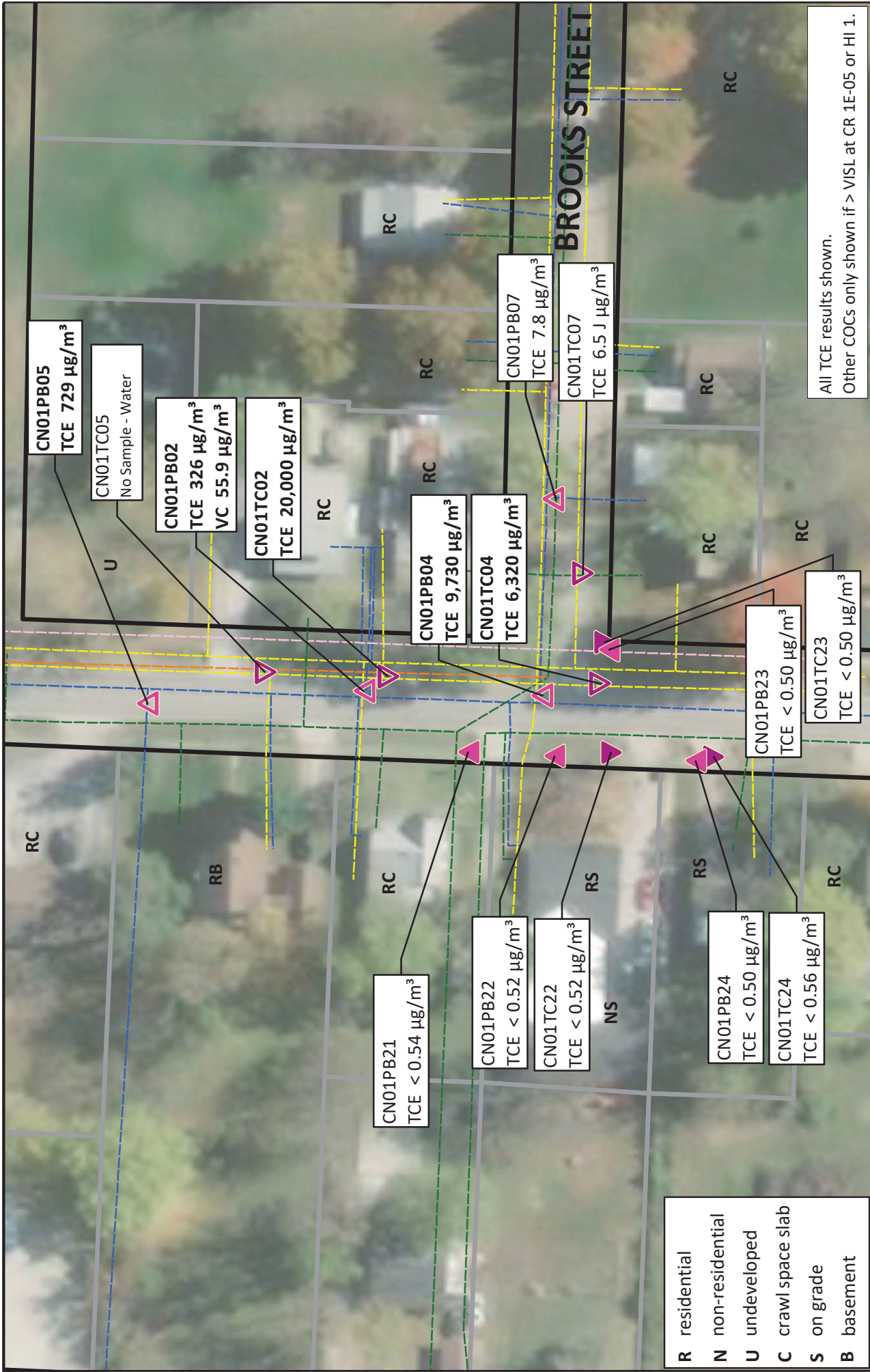
Fence  
 Right of Way  
 Parcel Boundaries  
 Rail Road  
 Utility Vault

N

**SOIL GAS SAMPLE RESULTS - MILL ST AREA**  
 SOLID STATE CIRCUITS, INC. SUPERFUND SITE  
 REPUBLIC, MISSOURI

**FIGURE 21**

1 : 1,250



All TCE results shown.  
Other COCs only shown if > VISL at CR 1E-05 or HI 1.

**AECOM**

Drawn By: SJM  
Checked By: KMC  
Date: 5/5/2020  
Project #: 60614391

**SOIL GAS SAMPLE RESULTS - BROOKS ST AREA**

SOLID STATE CIRCUITS, INC. SUPERFUND SITE  
REPUBLIC, MISSOURI

0 50 100 Feet  
1 : 1,250

FIGURE  
**22**





Sources: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

**AECOM**

Drawn By: JOT  
 Checked By: KMC  
 Date: 9/9/2021  
 Project #: 60614391

**Legend**

- PRIORITY PROPERTIES TARGETED FOR INDOOR AIR SAMPLING
- SANITARY SEWER LINE
- ROAD RIGHT OF WAY
- RAIL ROAD TRACK
- PARCEL BOUNDARIES

**PRIORITY PROPERTIES TARGETED FOR INDOOR AIR SAMPLING**

**AIR SAMPLING**

SOLID STATE CIRCUITS, INC. SUPERFUND SITE, REPUBLIC, MISSOURI

FIGURE

**23**

1 : 2,600 Feet 0 100 200 400



SSC-180 17-18 FT BLS  
c-DCE 0.0138 mg/kg

SSC-181  
NO DETECTS

SSC-182  
NO DETECTS

SSC-183  
NO DETECTS

SSC-184 17-18 FT BLS  
c-DCE 0.106 mg/kg  
TCE 0.351 mg/kg

SSC-185 2-3 FT BLS  
TCE 0.0095 mg/kg

SSC-186 2-3 FT BLS  
TCE 0.0231 mg/kg

SSC-187 2-3 FT BLS  
TCE 0.0122 mg/kg

SSC-188  
NO DETECTS

SSC-189  
NO DETECTS

SSC-190 17-18.5 FT BLS  
c-DCE 0.0436 mg/kg

SSC-191 2-3 FT BLS  
TCE 0.0133 mg/kg

SSC-192  
NO DETECTS

SSC-193  
NO DETECTS

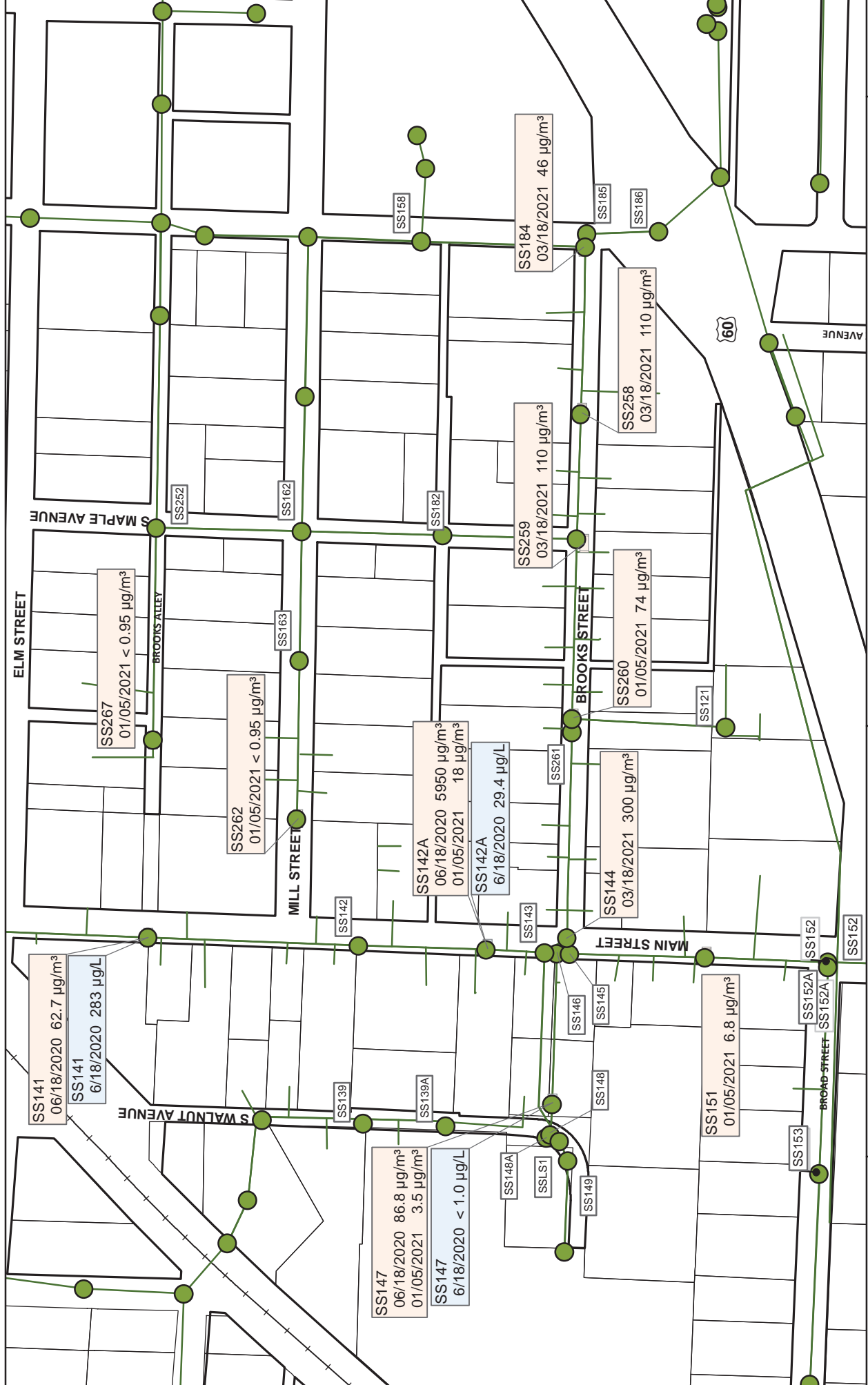
SSC-194  
NO DETECTS

MAIN STREET

BROOKS STREET







**AECOM**

Drawn By: JOT  
 Checked By: KMC  
 Date: 9/14/2021  
 Project #: 60614391

**Legend**

- TCE IN SEWER WATER
- TCE IN SEWER AIR
- SANITARY SEWER MANHOLES
- SANITARY SEWER LINE
- ROAD RIGHT OF WAY
- RAIL ROAD TRACK
- PARCEL BOUNDARIES

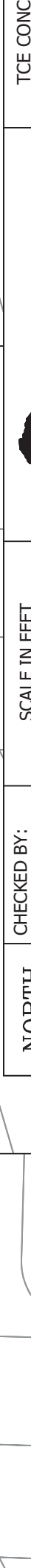


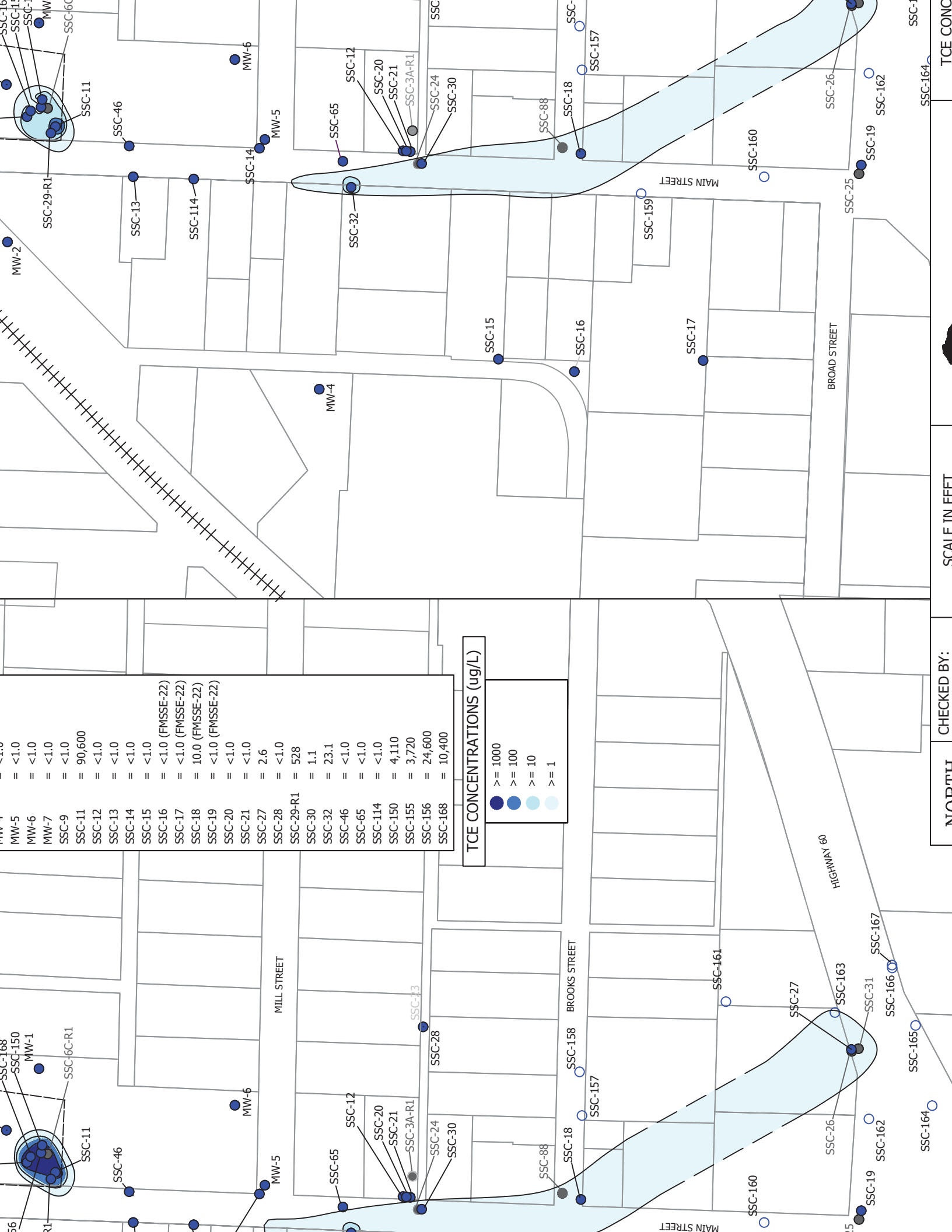
**SANITARY SEWER AIR & WATER SAMPLE RESULTS**

SAMPLES COLLECTED JUNE 2020 - MARCH 2021

SOLID STATE CIRCUITS, INC. SUPERFUND SITE  
 REPUBLIC, MISSOURI

1 : 3,000      Feet      0      100      200      400



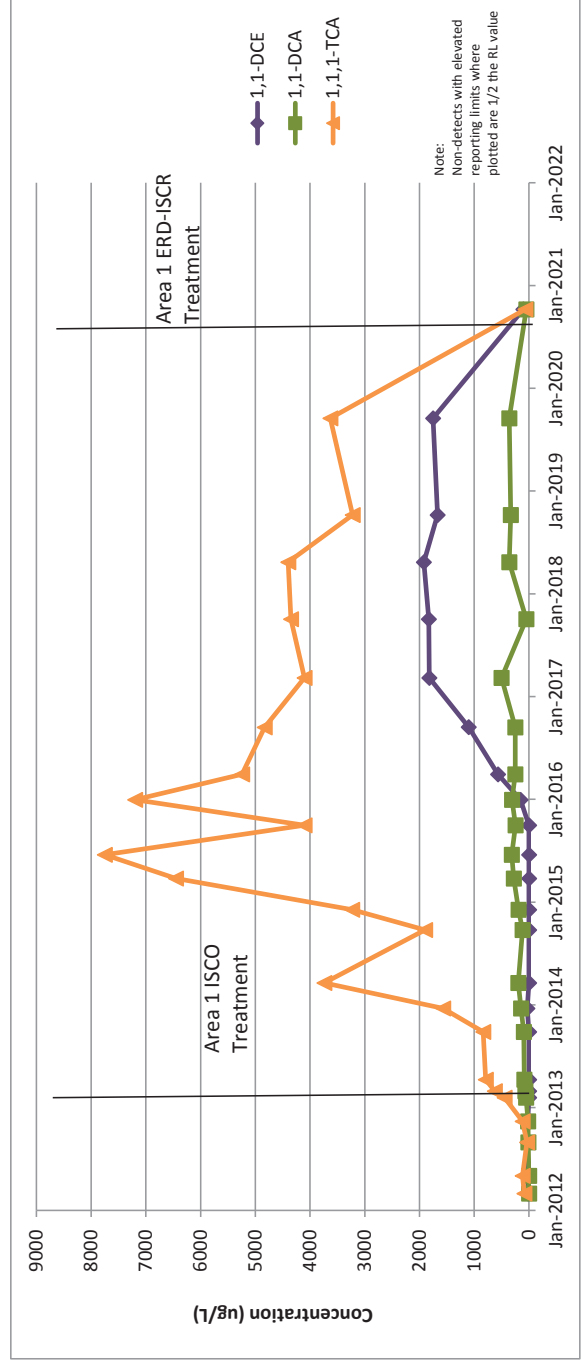
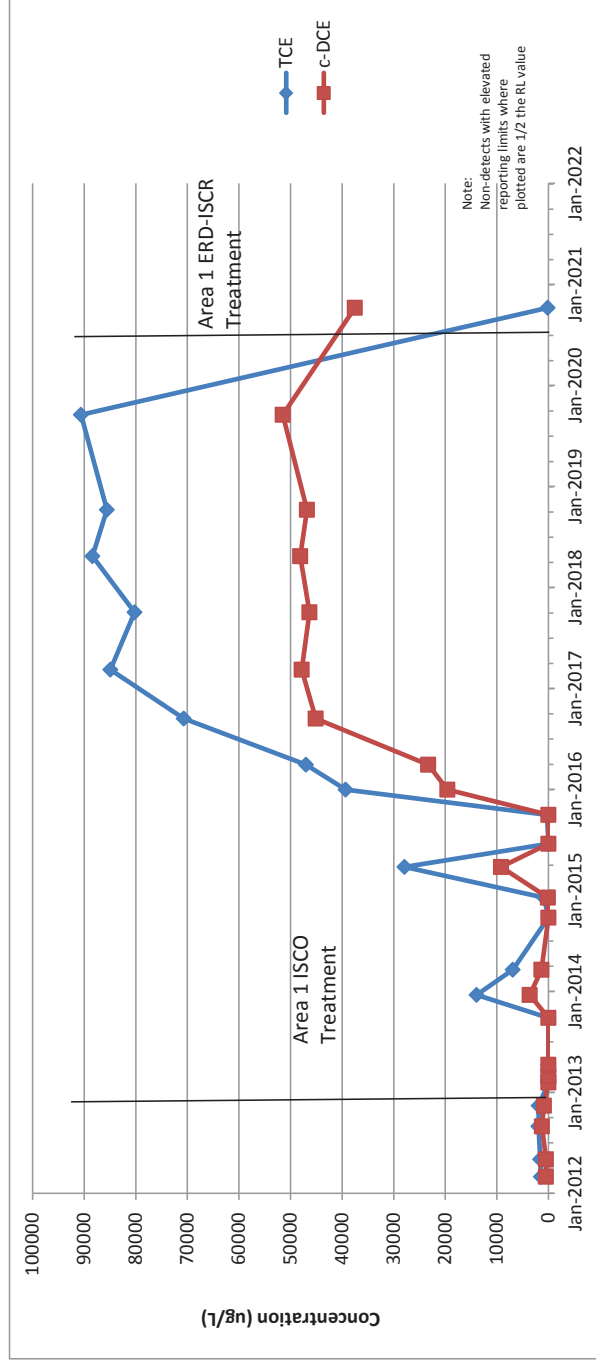




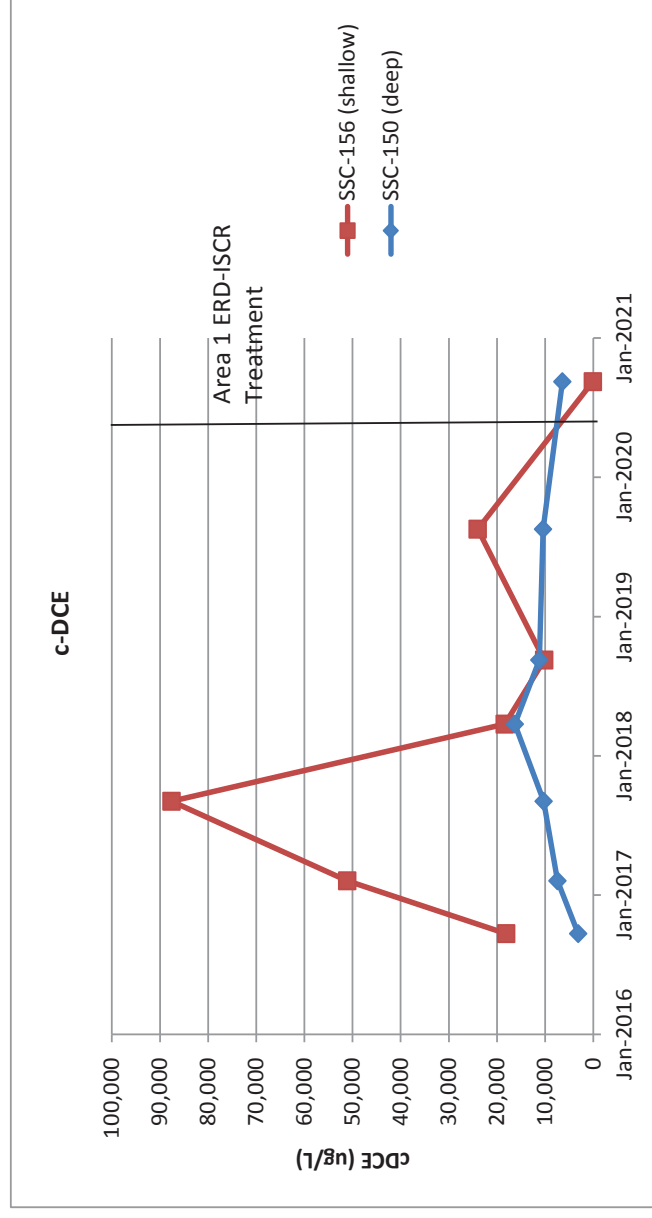
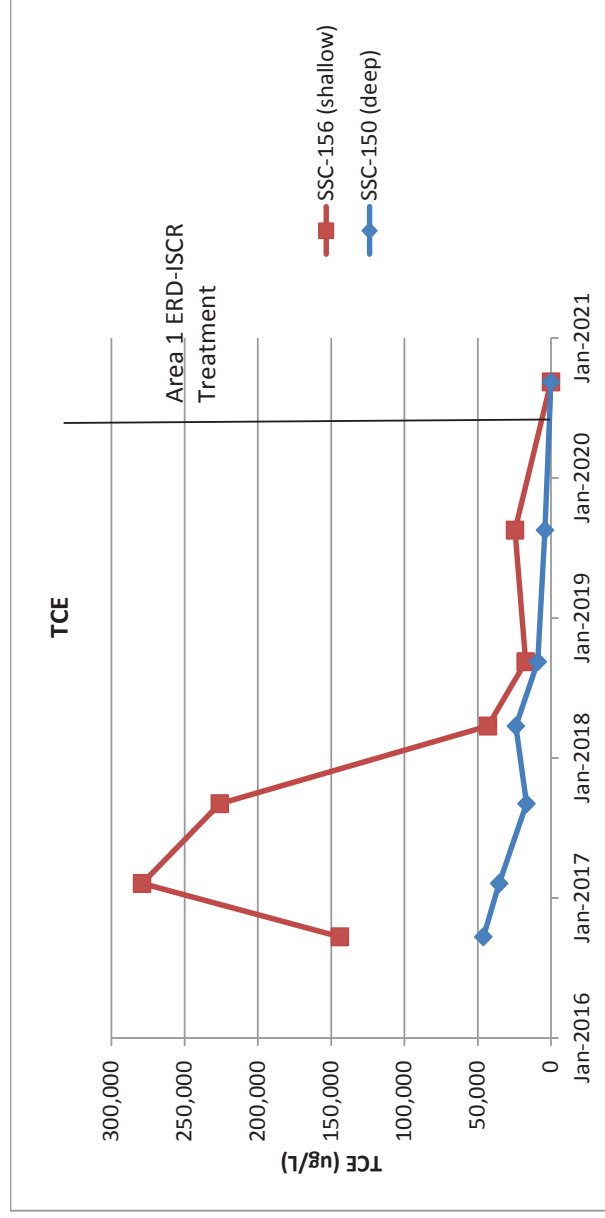




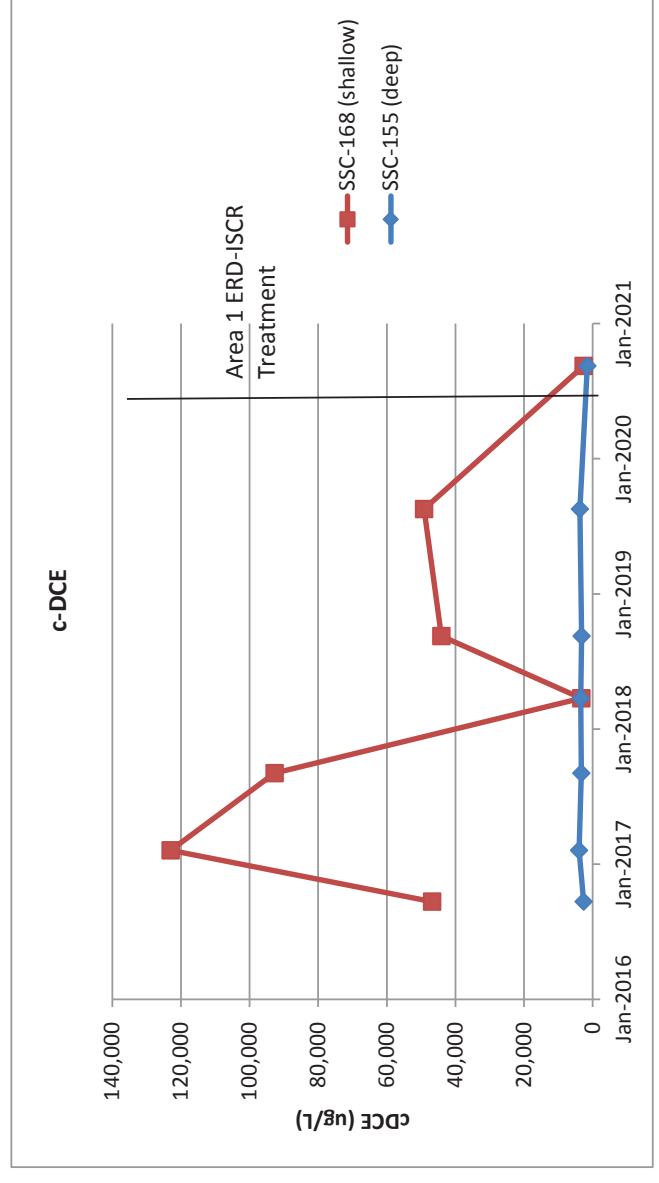
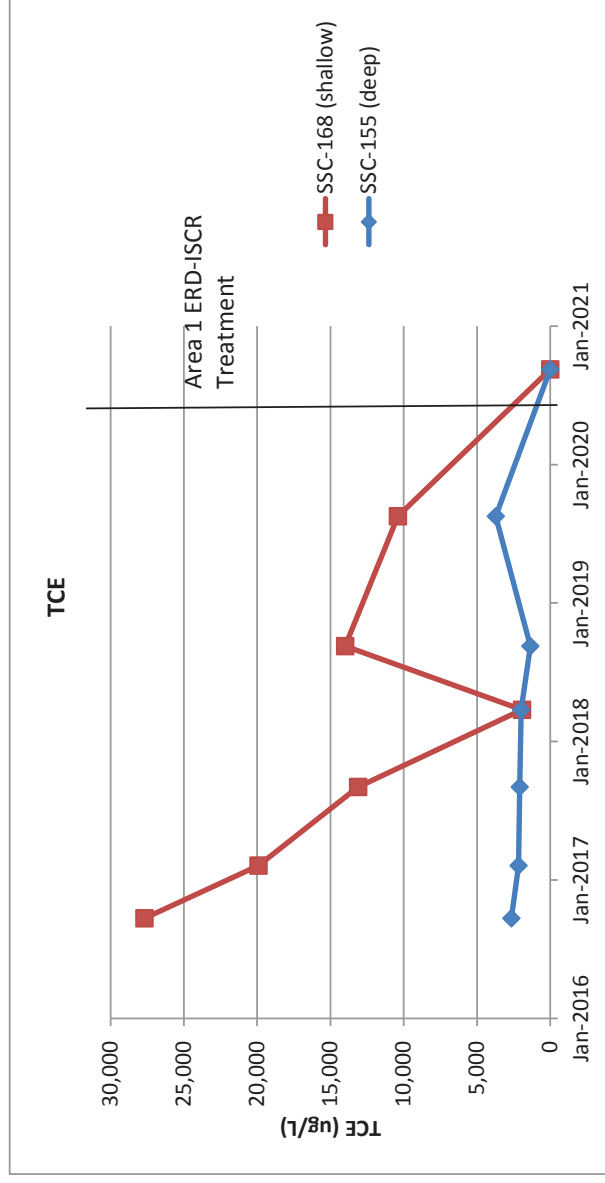
**FIGURE 30**  
**COC Concentrations in SSC-11 (UFSB)**  
**Solid State Circuits, Inc. Superfund Site**  
**Republic, Missouri**



**FIGURE 31**  
**COC Concentrations in SSC-150 and SSC-156 (UFSB)**  
Solid State Circuits, Inc. Superfund Site  
Republic, Missouri

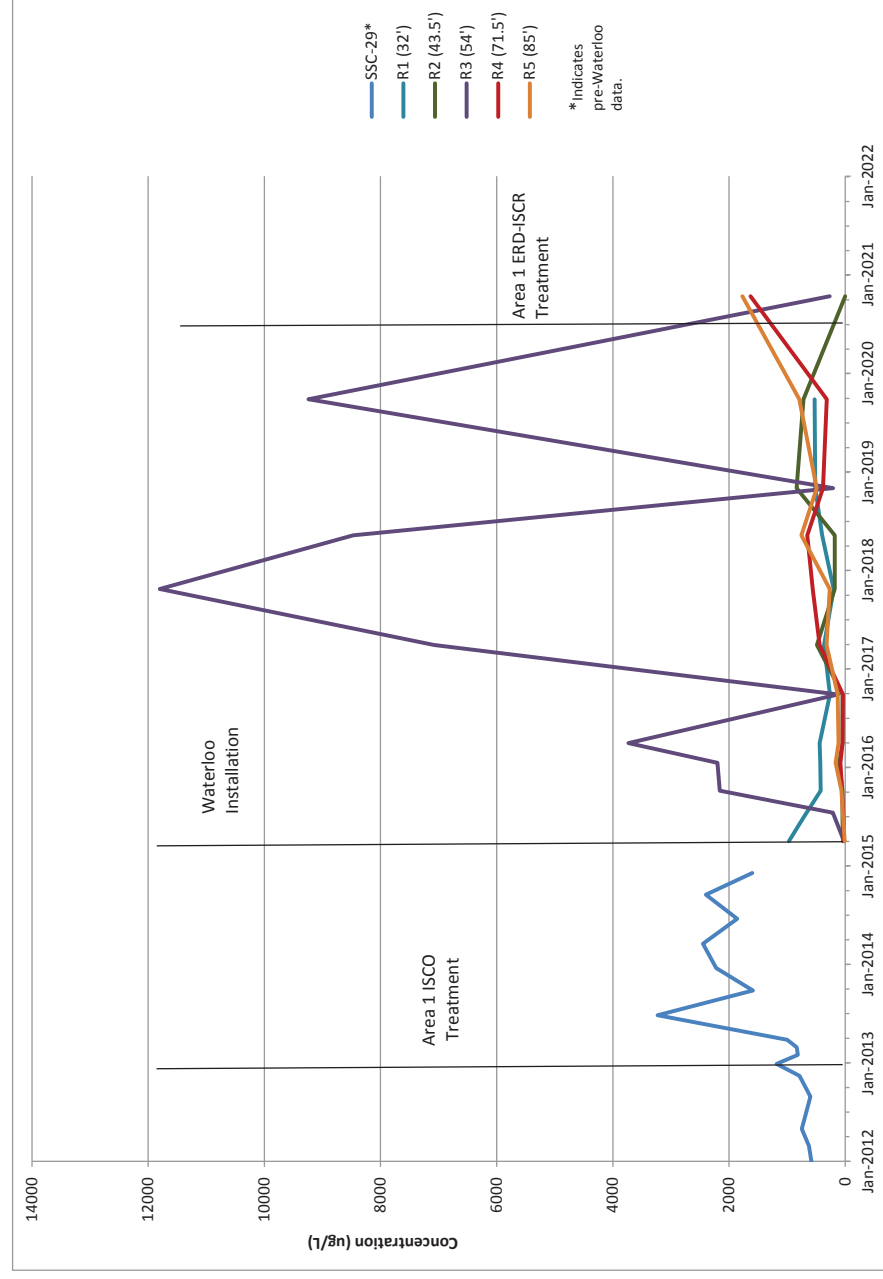


**FIGURE 32**  
**COC Concentrations in SSC-155 and SSC-168 (UFSB)**  
Solid State Circuits, Inc. Superfund Site  
Republic, Missouri

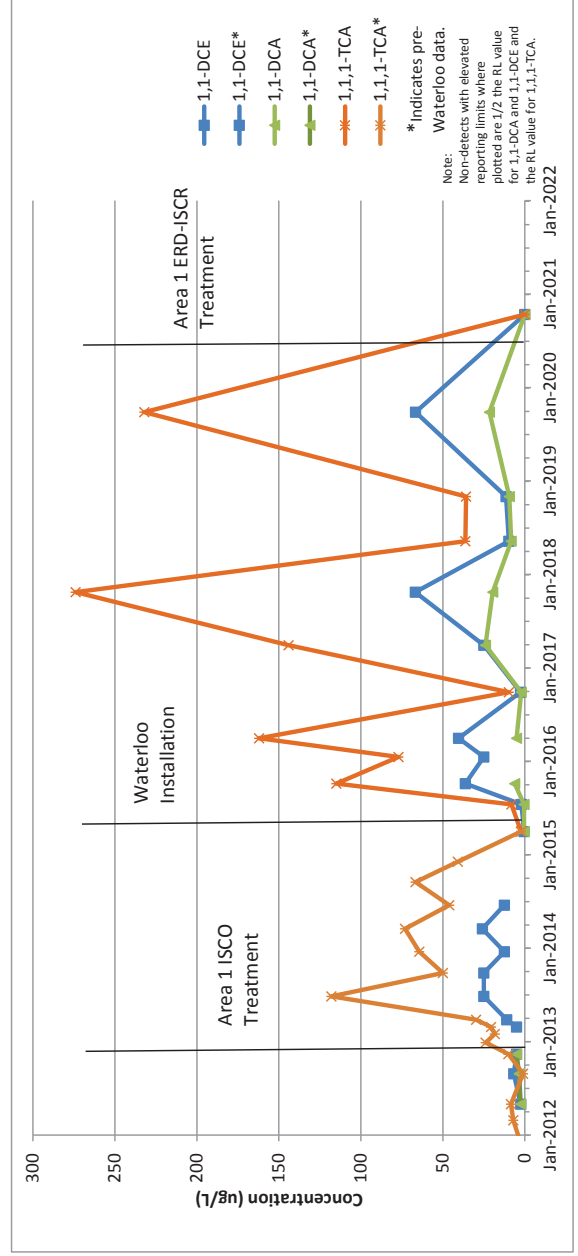
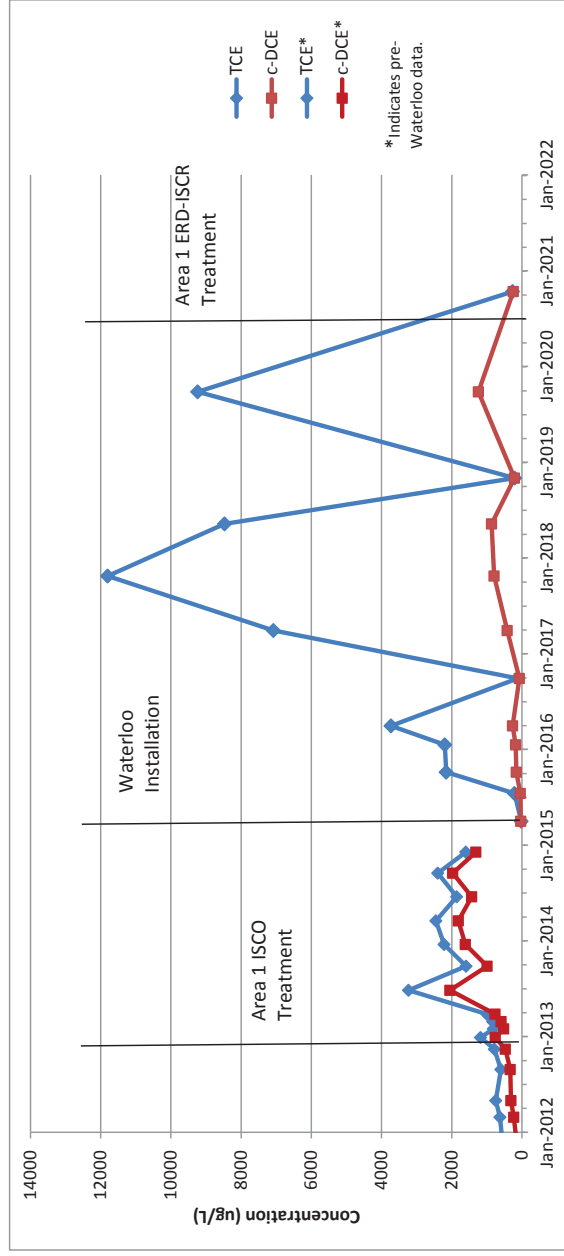




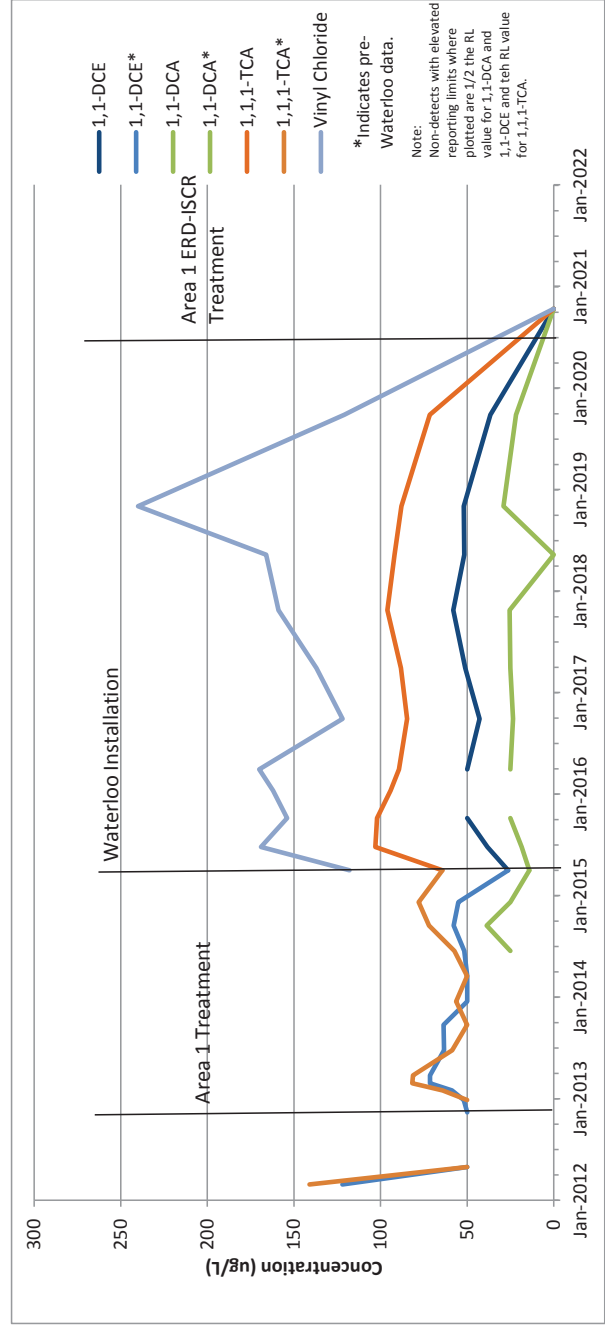
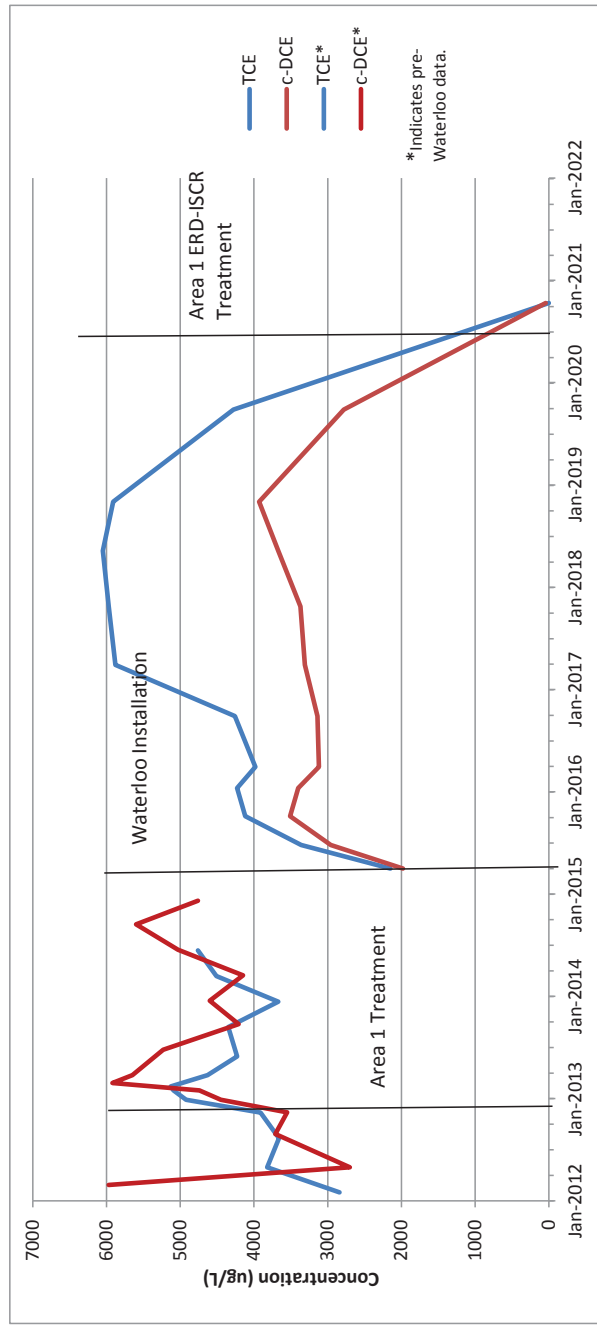
### FIGURE 33



**FIGURE 34**  
**COC Concentrations in SSC-29-R3 (43.5 ft bmp) (UFSB)**  
 Solid State Circuits, Inc. Superfund Site  
 Republic, Missouri

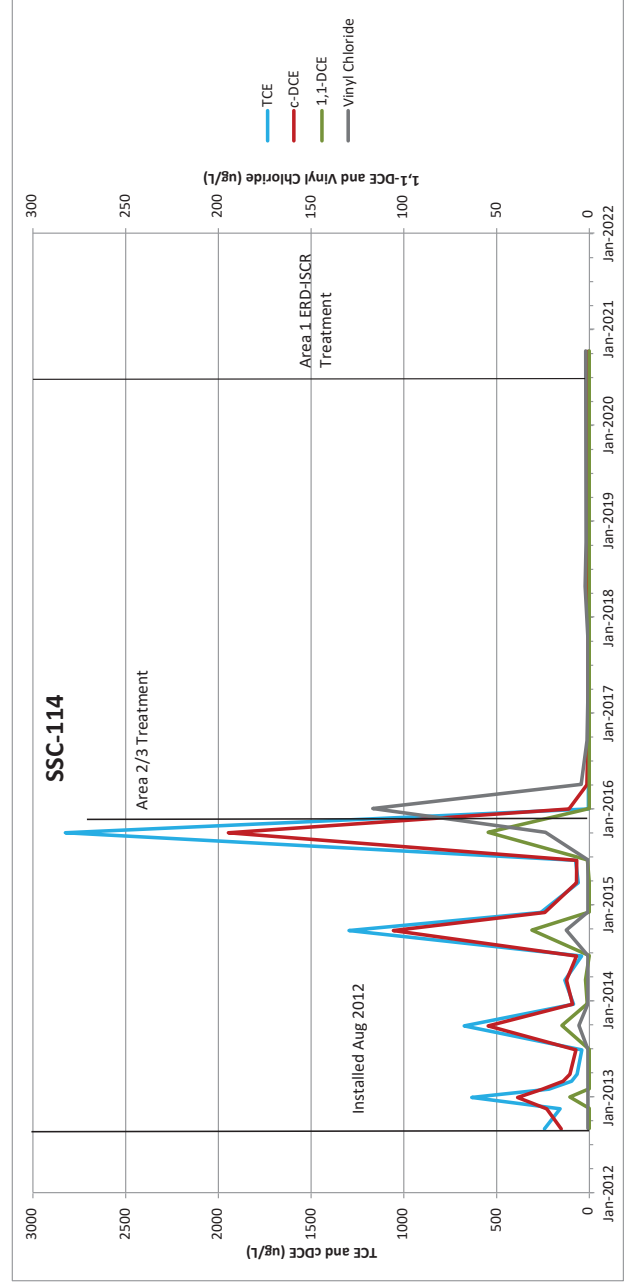
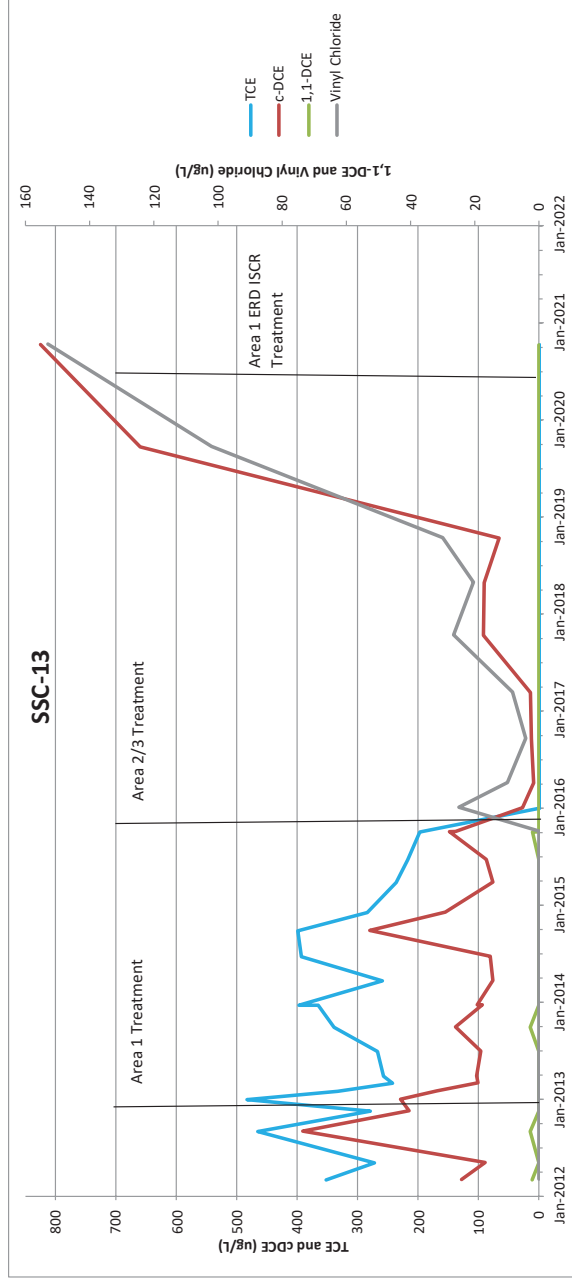


**FIGURE 35**  
**COC Concentrations in SSC-6C-R1 (42 ft bmp) (UFSB)**  
**Solid State Circuits, Inc. Superfund Site**  
**Republic, Missouri**

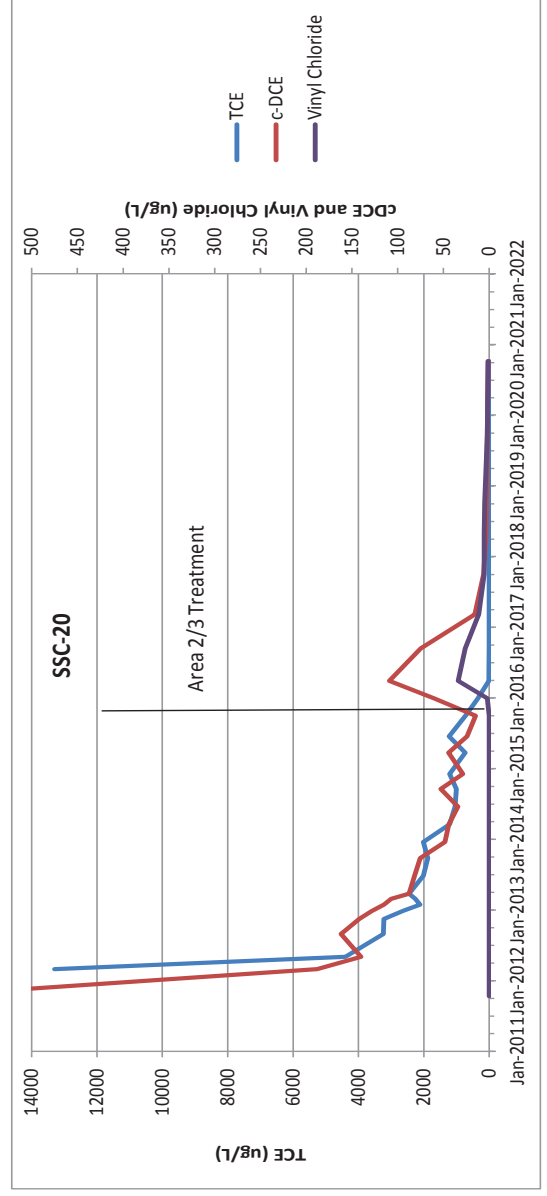
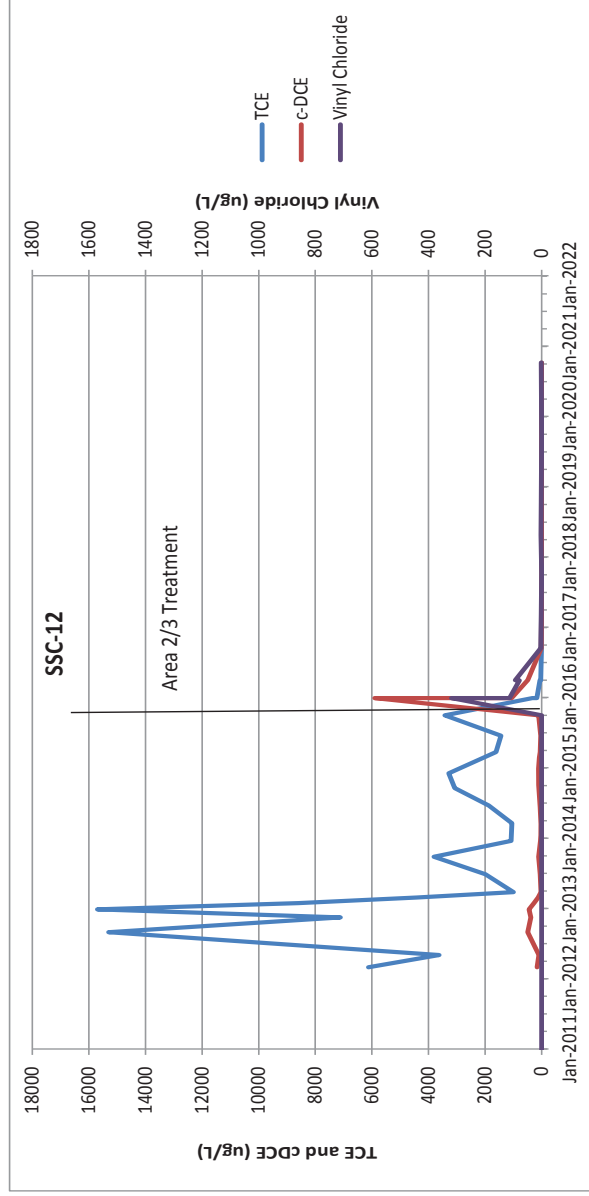




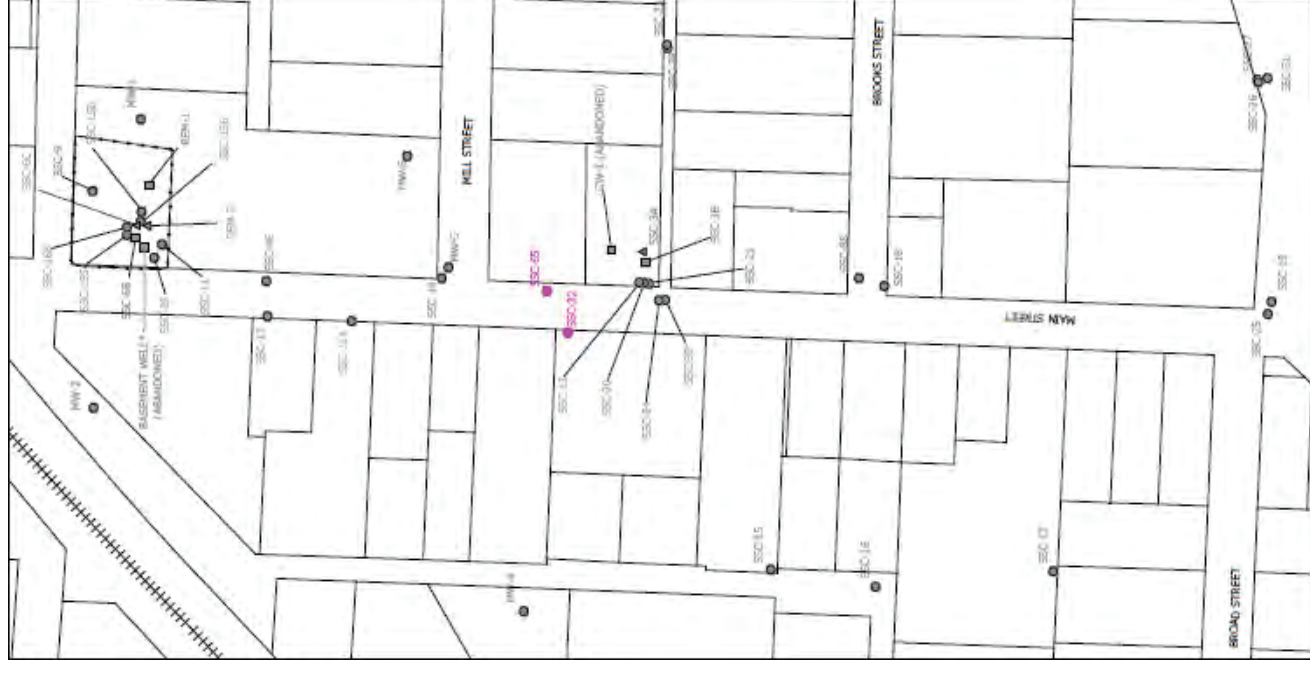
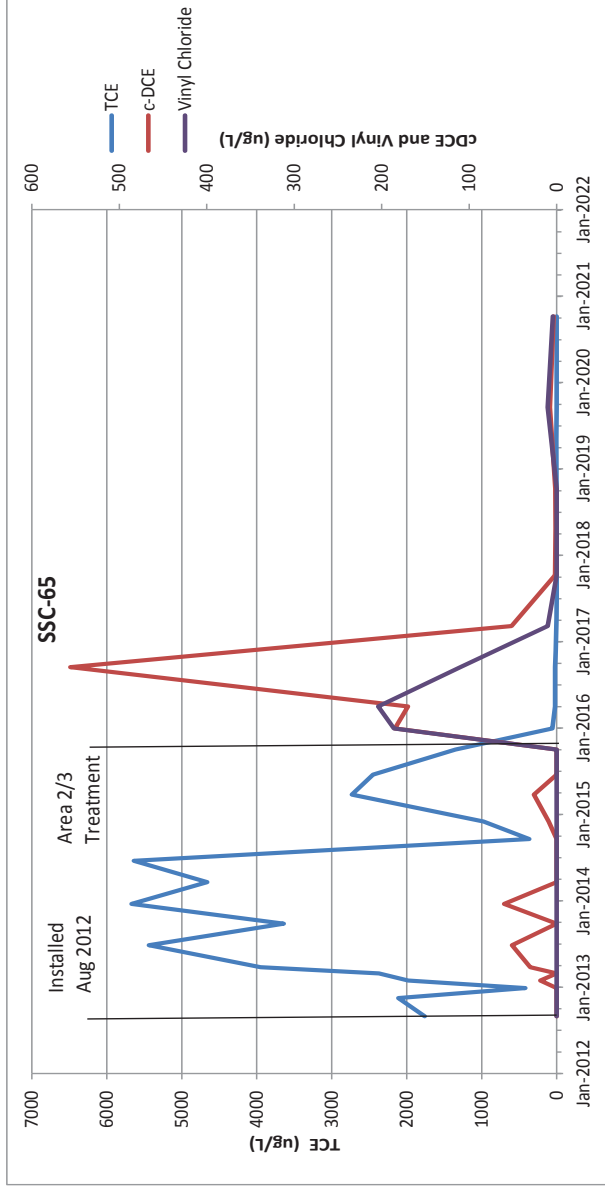
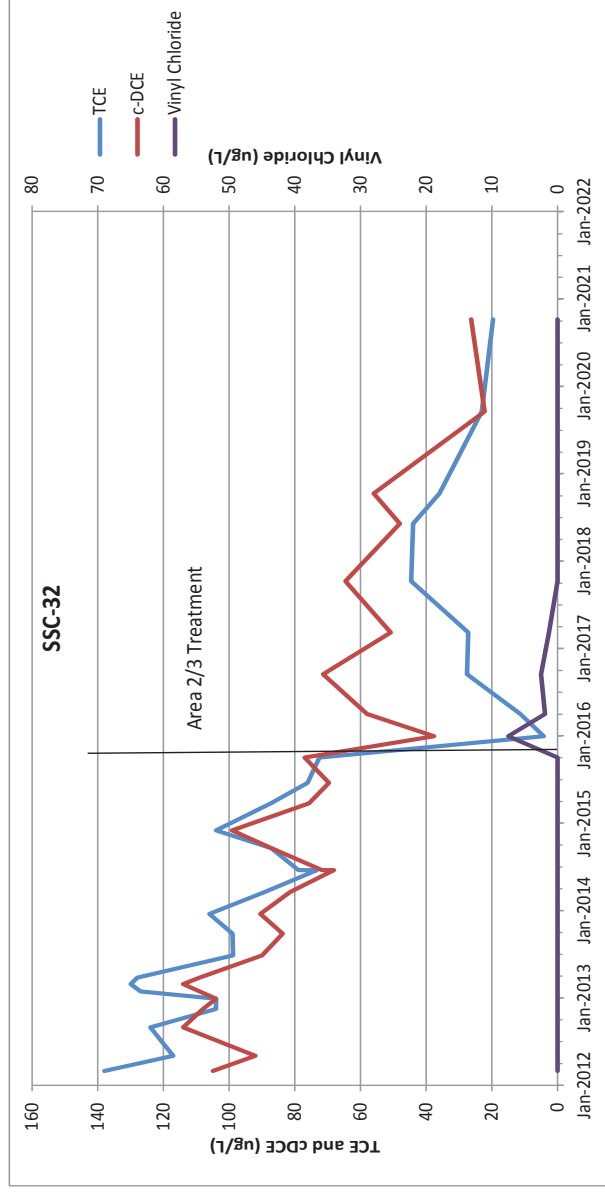
**FIGURE 36**  
**COC Concentrations in SSC-13 and SSC-114 (UFSB)**  
 Solid State Circuits, Inc. Superfund Site  
 Republic, Missouri



**FIGURE 37**  
**COC Concentrations in SSC-12 and SSC-20 (UFSB)**  
Solid State Circuits, Inc. Superfund Site  
Republic, Missouri

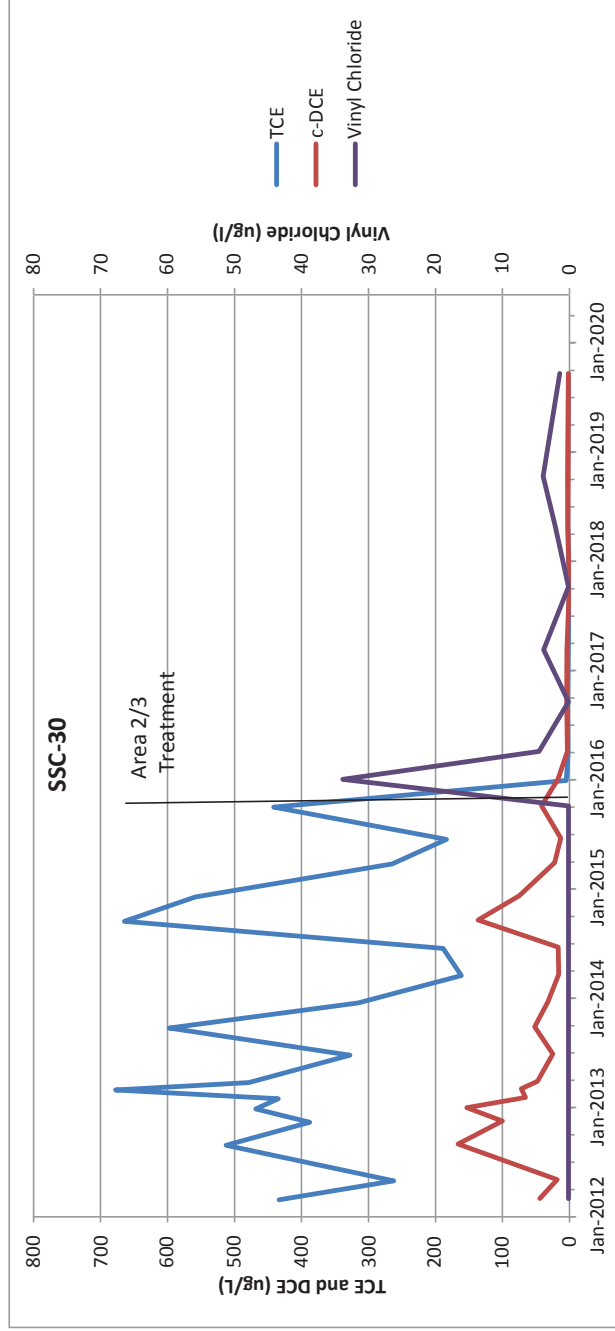
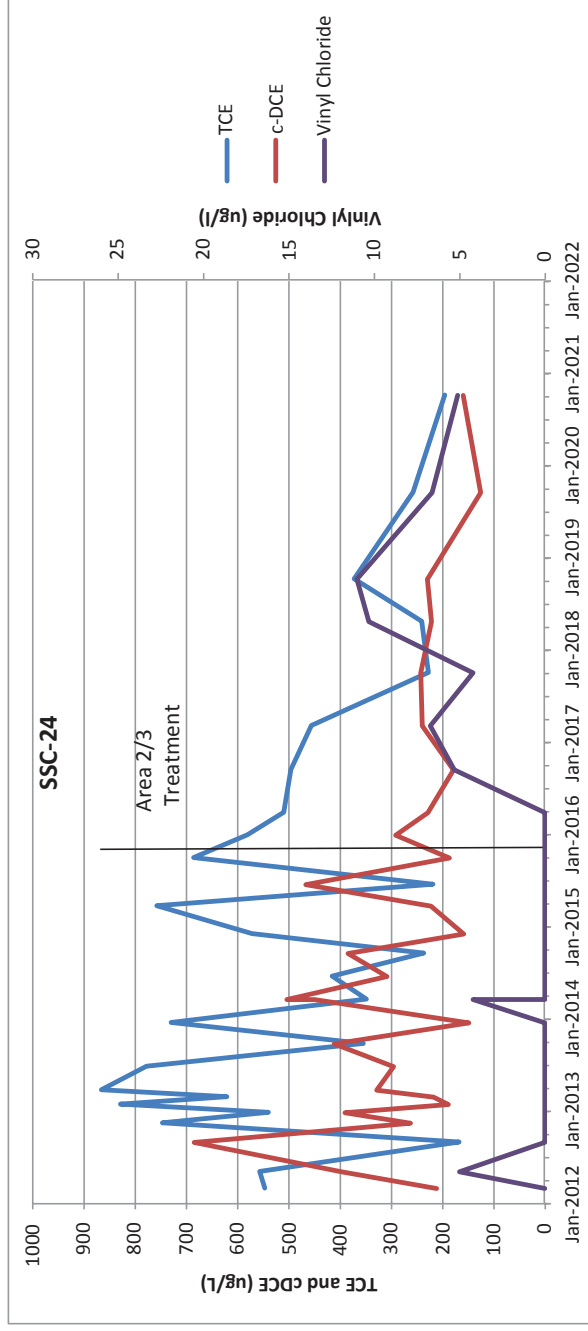


**FIGURE 38**  
**COC Concentrations in SSC-32 and SSC-65 (UFSB)**  
 Solid State Circuits, Inc. Superfund Site  
 Republic, Missouri

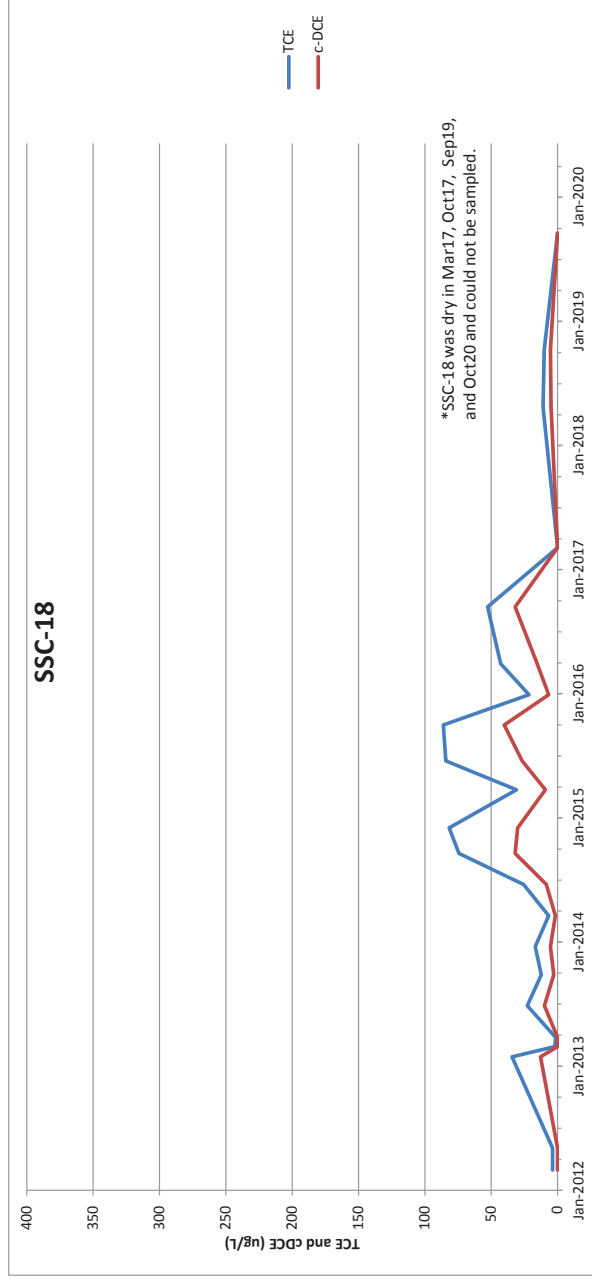




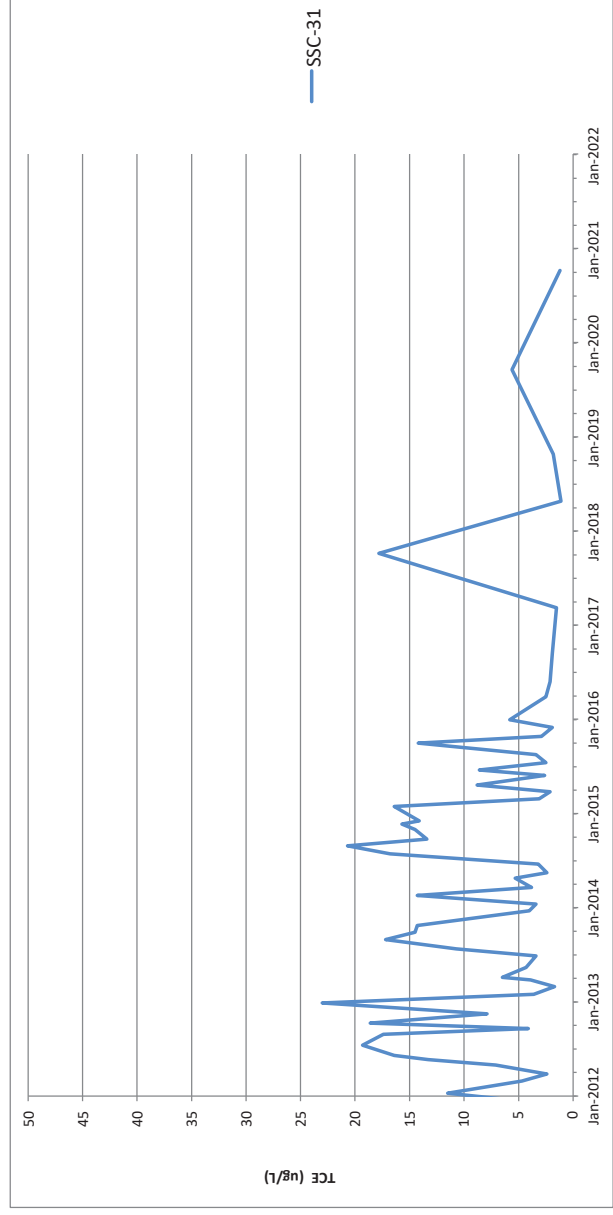
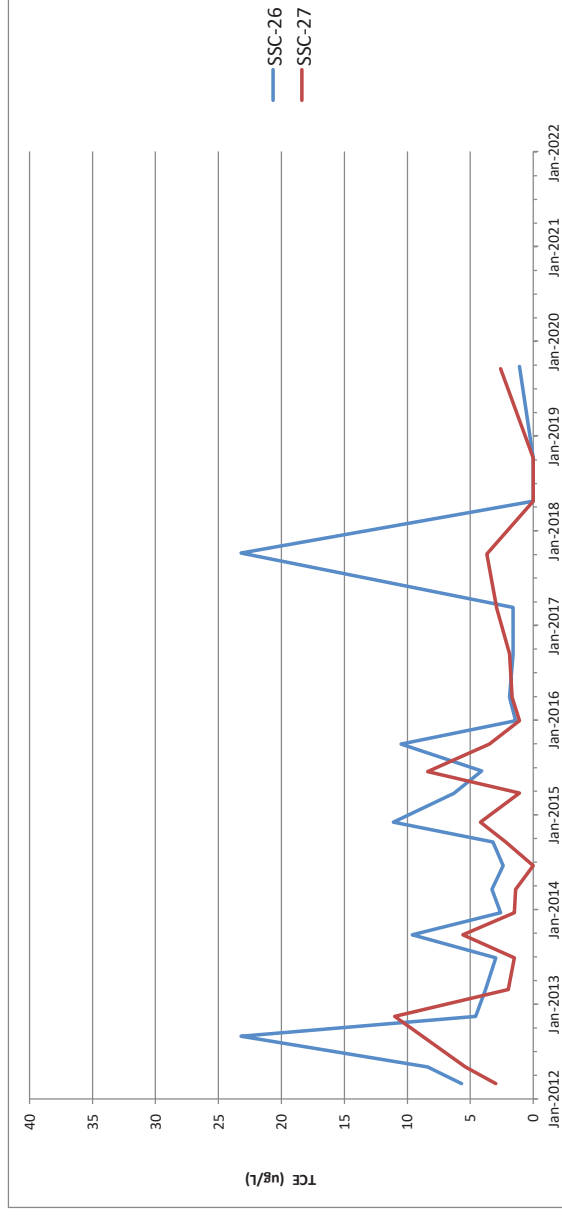
**FIGURE 39**  
**COC Concentrations in SSC-24 and SSC-30 (UFSB)**  
 Solid State Circuits, Inc. Superfund Site  
 Republic, Missouri



**FIGURE 40**  
**COC Concentrations in SSC-18 and SSC-88 (UFSB)**  
Solid State Circuits, Inc. Superfund Site  
Republic, Missouri

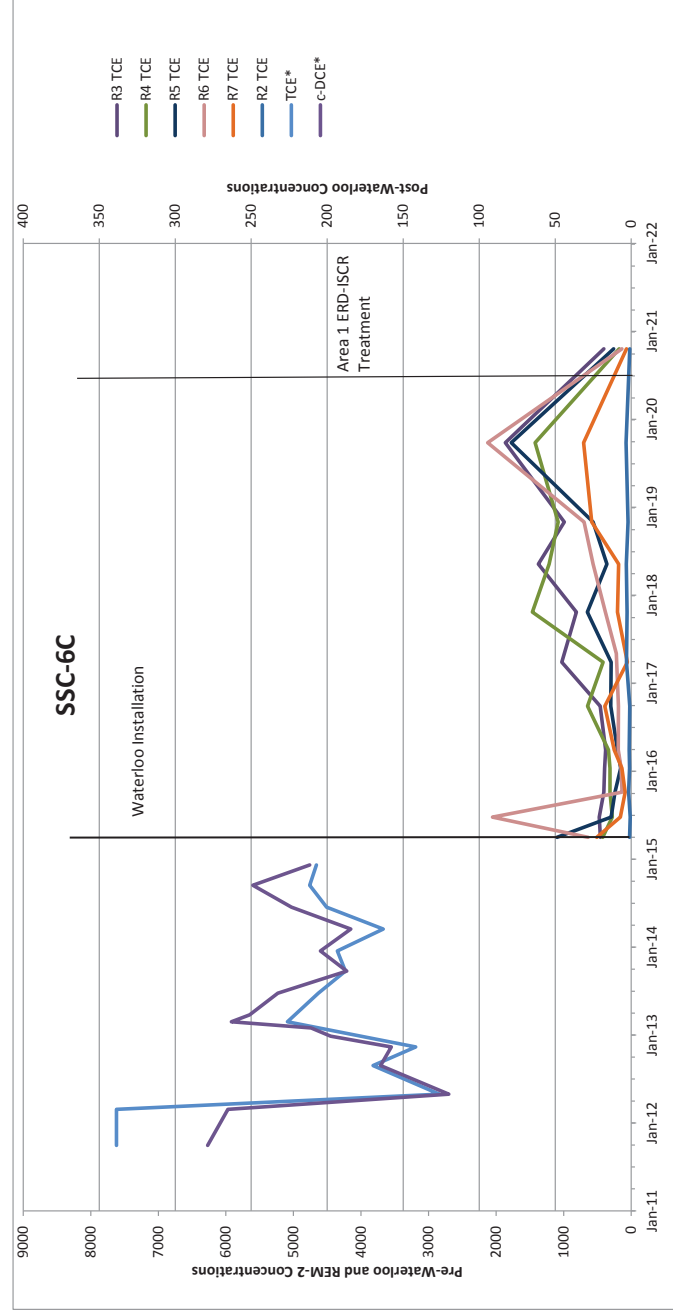
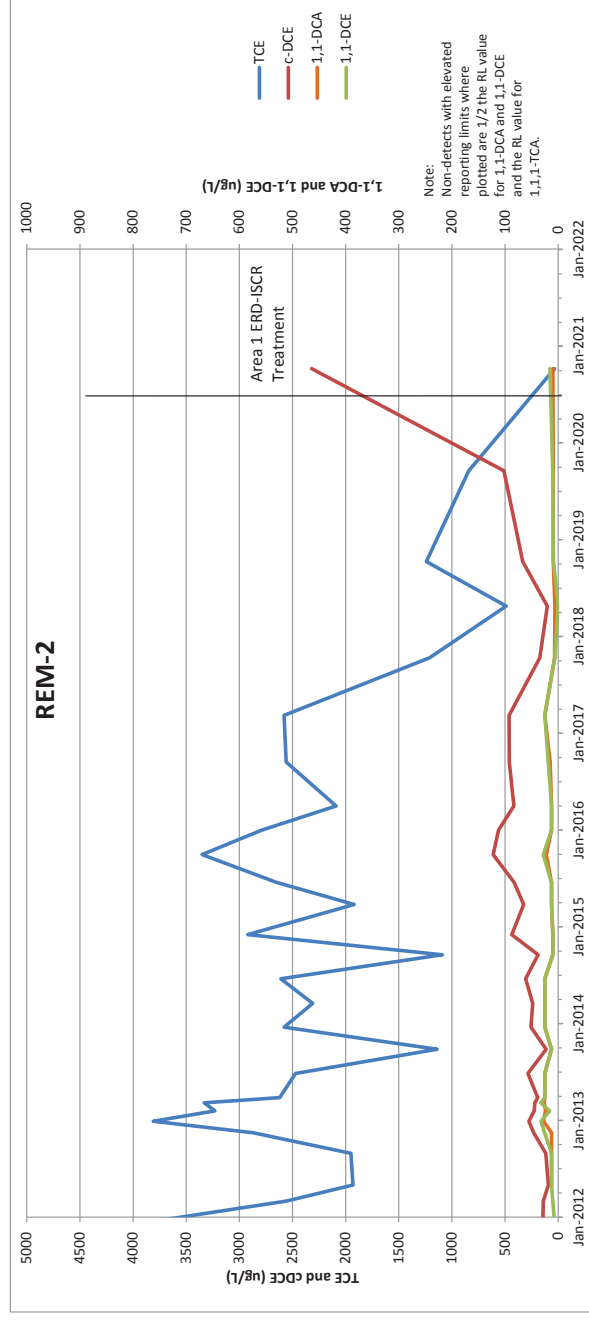


**FIGURE 41**  
**TCE Concentrations in SSC-26, SSC-27, and SSC-31 (UFSB)**  
Solid State Circuits, Inc. Superfund Site  
Republic, Missouri

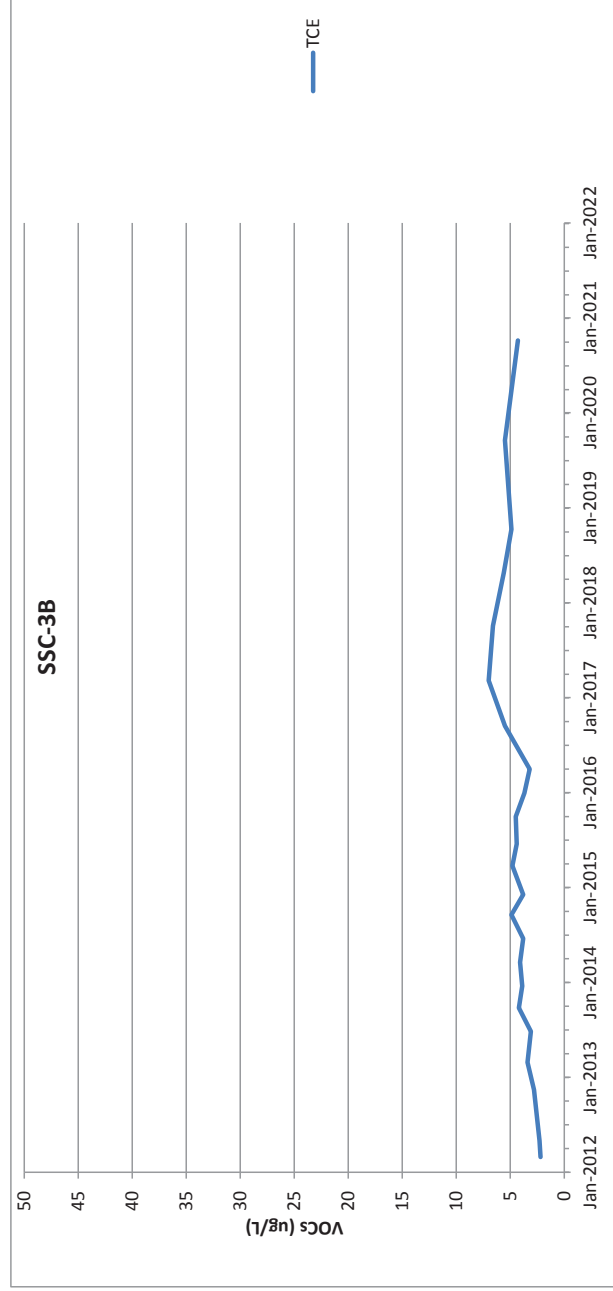
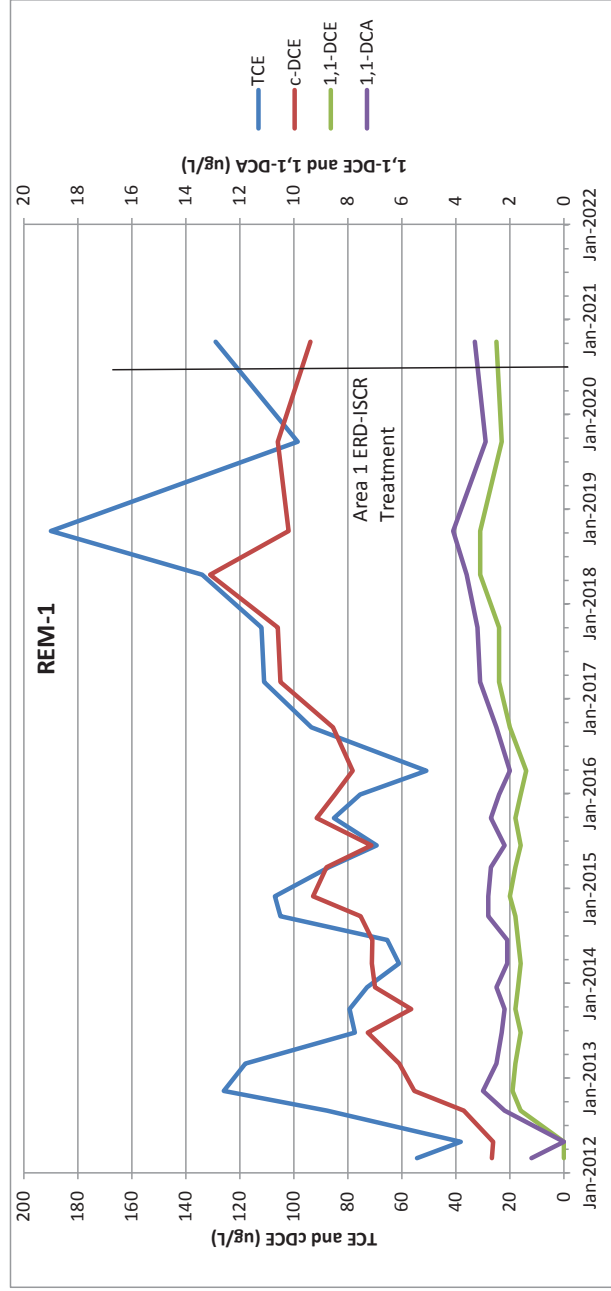




**FIGURE 42**



**FIGURE 43**  
**COC Concentrations in DBR Wells**  
**Solid State Circuits, Inc. Superfund Site**  
**Republic, Missouri**



## APPENDIX A

## REFERENCES



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**ATTACHMENT B**  
**SITE CHRONOLOGY**

Key Events	Date
SSC manufactured printed circuit boards	1968 - 11/1973
TCE discovered in CW-1 during NSOC Survey	06/1982
Agencies conducted response activities	04/1983 - 03/1984
SSC site placed on the Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites in Missouri ( <i>Registry</i> )	02/22/1985
Department and PRPs conducted Removal Activities	03/1985 - 11/1985
EPA signed Action Memorandum	4/5/1985
EPA conducted Removal Activities	4/5/1985 - 10/31/1985
Multi-Site Cooperative Agreement between Agencies signed	10/01/1985
Final listing on EPA National Priorities Listing (NPL)	06/10/1986
Settlement Agreement & Consent Decree entered by Federal Court	11/20/1986
Stipulation & Joint Motion to Amend Settlement Agreement & Consent Decree entered by Federal Court	02/04/1988
SSC conducted Remedial Investigation/Feasibility Study (RI/FS)	12/1986 - 07/1989
ROD selecting the remedy was signed & executed	09/27/1989
Administrative Order for Remedial Design & Remedial Action (RD/RA) was entered by Federal Court	06/20/1990
Consent Decree/Statement of Work (CD/SOW) was signed	07/25/1990 - 11/23/1990
RD Pilot Remediation Program	09/01/1991 - 1/31/1992
100% RD Document Package (100% RDDP) was submitted	10/1992
100% RDDP approved by Department with EPA concurrence	12/22/1992
Implementation of Remedial Action (RA) Construction	01/11/1993
RA Construction completion date	09/20/1993
Preliminary Close Out Report received by the Department	12/01/1993
RA Certification Report received by the Department	05/1994
RA Operation & Maintenance (O&M) Plan approved	06/16/1994
ESD modifying UFSB and DBR chemical quality and hydraulic performance monitoring standards	10/24/1996
First FYR approved	12/12/1996
Horizontal well pilot test	2001-2002
Second FYR approved	09/20/2002
ESD to allow full operation of the horizontal well	09/2004
Gore-Sorber Soil Vapor Survey Report approved	08/28/2007
Third FYR approved	09/12/2007
Supplemental Site Investigation for soil and groundwater	11/2009 - 03/2010
Draft Pilot Program Work Plan for Soil Source Area 1 submitted	01/07/2011
Public Notice for Start of Fourth FYR Process	07/15/2011
Supplemental Site Investigation (SSI) Report approved	07/28/2011
Partial (DBR) abandonment of Republic's CW-1 well	11/08/2011
Groundwater Pump and Treat Facility fire and limited site visit	12/08/2011
Force Majeure/Excusable Delay (FM/ED) Agreement effective	06/15/2012
Fourth FYR Report approved	09/21/2012

Key Events	Date
First Modification of FM/ED Agreement effective	12/08/2014
Second Modification of FM/ED Agreement effective	02/05/2015
Public Notice for Start of Fifth FYR	07/26/2016
Fifth FYR site visit	10/20/2016
Parcel containing SSC Site is sold	08/25/2017
Third Modification of FM/ED effective	08/31/2017
Vapor Intrusion Investigation Work Plan approved	09/14/2017
Fifth FYR approved	09/19/2017
Building south of source area razed	10/04/2017
Supplemental soil sampling	11/13, 11/14/ 2017
Fourth Modification of FM/ED Agreement effective	03/31/2018
Site parcel subdivided	12/26/2018
Fifth Modification of FM/ED Agreement effective	06/30/2019
Sixth Modification of FM/ED Agreement effective	06/30/2020
Area 1 Pilot Program soil injection activities	06/2020 - 07/2020
Public Notice for Start of Sixth FYR	09/12/2021
Public Availability Session	09/27/2021
Door Knocking Outreach	10/13/2021- 10/14/2021
Key Property Investments, LLC buys southern parcel	11/18/2021
Sixth FYR site inspection	12/14/2021
Sewer rehabilitation	12/2021 - 01/2022



APPENDIX C

ANALYTICAL DATA



[illegible]



Benzene	Chloro-ethane	Chloro-form	1,1-DCA	1,2-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	PCE	Toluene
5	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	5	1,000
5	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	5	1,000
< 50	< 50	< 50	< 50	< 50	122	5,970	< 50	6,010	NA	NA	< 500	136	< 50	< 50
< 50	< 50	< 50	< 50	< 50	< 50	2,700	< 50	2,720	NA	NA	< 500	< 50	< 50	< 50
< 50	< 50	< 50	< 50	< 50	< 50	3,710	< 50	3,740	NA	NA	< 500	< 50	< 50	< 50
< 50	< 50	< 50	< 50	< 50	< 50	3,550	< 50	3,550	NA	NA	< 500	< 50	< 50	< 50
< 50	< 50	< 50	< 50	< 50	71.4	5,920	< 50	5,950	NA	NA	< 500	< 50	< 50	< 50
< 50	< 50	< 50	< 50	< 50	63.3	5,230	< 50	5,260	< 15	NA	< 500	< 50	< 50	< 50
< 50	< 50	< 50	< 50	< 50	63.6	4,210	166	4,380	NA	7.8	< 500	< 50	< 50	< 50
< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	4,600	< 50.0	4,630	5.9	NA	< 500	< 50.0	< 50.0	< 50.0
< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	4,150	216	4,360	7.3	NA	< 500	< 50.0	< 50.0	< 50.0
< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	51.6	5,030	222	5,260	NA	NA	< 500	< 50.0	< 50.0	< 50.0
< 1.0	< 1.0	< 1.0	38.7	< 1.0	57.8	4,710	< 200	4,740	NA	NA	< 10.0	< 1.0	2.5	< 1.0
< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	55.5	5,600	< 50.0	5,640	NA	NA	< 500	< 50.0	< 50.0	< 50.0
< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	55.1	4,760	289	5,040	NA	NA	< 500	< 50.0	< 50.0	< 50.0
< 1.0	< 1.0	< 1.0	14.1	< 1.0	26.4	1,980	65.2	2,060	< 3.0 UJ	NA	< 10.0	< 1.0	1.1	< 1.0
< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	29.5	3,190	37.5	3,230	NA	NA	< 250	25.4	< 25.0	< 25.0
< 1.0	< 1.0	< 1.0	18.5	< 1.0	38.3	2,960	37.1	3,000	NA	NA	< 10.0	1.2	1.8	< 1.0
< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	3,510 J	< 50.0	3,560	NA	NA	< 500	< 50.0	< 50.0	< 50.0
< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	3,400	< 50.0	3,440	NA	NA	< 500	< 50.0	< 50.0	< 50.0
< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	3,120	< 50.0	3,170	3.4	NA	< 500	< 50.0	< 50.0	< 50.0
< 3.0 M	< 7.5 M	< 7.0 M	23.5 J	< 6.0 M	42.8 J	3,140	38.2 J	3,180	NA	NA	< 29.5 M	< 7.5 M	< 5.0 M	< 8.5 M
< 3.0 M	< 7.5 M	< 7.0 M	< 2.5 M	< 6.0 M	51.1	3,310 J	< 10.0 M	3,350 J	< 3.0	NA	< 29.5 M	< 7.5 M	< 5.0 M	< 8.5 M
< 3.0 M	< 7.5 M	< 7.0 M	25.5 J	< 6.0 M	58.0	3,370	39.8 J	3,410	NA	NA	< 29.5 M	< 7.5 M	< 5.0 M	< 8.5 M
< 3.0 M	< 7.5 M	< 7.0 M	< 2.5 M	< 6.0 M	51.6 J	3,670	59.3	3,730	< 3.0	NA	< 29.5 M	< 7.5 M	< 5.0 M	< 8.5 M
< 1.0	2.7	< 1.0	29.0	< 1.0	39.4	3,550	79.9	3,630	NA	NA	< 10.0	< 1.0	1.8	< 1.0
< 3.0 M	< 7.5 M	< 7.0 M	29.1 J	< 6.0 M	51.8	3,930	80.0	4,010	NA	NA	< 29.5 M	< 7.5 M	< 5.0 M	< 8.5 M
< 1.0	< 1.0	< 1.0	24.5	< 1.0	39.0	2,830	55.5	2,880	NA	NA	< 10.0	< 1.0	1.2	< 1.0
< 4.0 M	< 21.0 M	< 5.0 M	21.8 J	< 7.0 M	36.6 J	2,780	50.6	2,830	< 3.0	NA	< 35.0 M	< 13.5 M	< 11.0 M	< 7.0 M
< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	42.5	< 1.0	42.9	NA	NA	49.6	< 1.0	< 1.0	< 1.0



Benzene	Chloro-ethane	Chloro-form	1,1-DCA	1,2-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	PCE	Toluene
5	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	5	1,000
5	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	5	1,000
< 10	< 10	< 10	< 10	< 10	17.4	455	< 10	459	NA	NA	< 100	< 10	< 10	< 10
< 10	< 10	< 10	< 10	< 10	21.7	463	< 10	467	NA	NA	< 100	< 10	< 10	< 10
< 10	< 10	< 10	11.2	< 10	25.5	1,240	< 10	1,250	NA	NA	< 100	< 10	< 10	< 10
< 10	< 10	< 10	17.4	< 10	19.6	884	< 10	893	NA	NA	< 100	10.5	< 10	< 10
< 5	< 5	< 5	51.2	< 5	< 5	< 5	< 5	< 5	NA	NA	< 50	72.1	< 5	< 5
< 5	< 5	< 5	67.2	< 5	< 5	< 5	< 5	< 5	NA	NA	< 50	79.0	< 5	< 5
< 5		< 5	124	< 5	< 5	284	< 5	284	56.1	NA	< 50	6.4	8.9	12.4
< 25	< 25	< 25	95.6	< 25	< 25	< 25	< 25	< 25	NA	55.9	< 250	< 25	< 25	< 25
< 20.0		< 20.0	144	< 20.0	31.8	3,610	< 20.0	3,620	85.6	NA	< 200	< 20.0	< 20.0	< 20.0
< 100		< 100	194	< 100	< 100	1,370	174	1,550	61.6	NA	< 1000	< 100	< 100	< 100
< 25.0		< 25.0	133	< 25.0	< 25.0	296	29.9	326	NA	NA	< 250	< 25.0	< 25.0	< 25.0
< 25.0		< 25.0	119	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	NA	NA	< 250	< 25.0	< 25.0	< 25.0
< 25.0		< 25.0	192	< 25.0	< 25.0	87.2	< 25.0	87.2	NA	NA	< 250	< 25.0	< 25.0	< 25.0
< 25.0		< 25.0	278	< 25.0	< 25.0	9,160	259	9,420	NA	NA	< 2500	< 250	< 250	< 250
									63.3 J	NA				
< 100	< 100	< 100	316	< 100	22.9 J	25.7 J	< 100	< 100	NA	NA	< 1000	34.8 J	18.5 J	45.9 J
< 100	< 100	< 100	244	< 100	< 100	< 100	< 100	< 100	NA	NA	< 1000	< 100	< 100	< 100
< 100	< 100	< 100	307	< 100	153	19,600	373	20,000	NA	NA	< 1000	< 100	< 100	< 100
< 50.0	< 50.0	< 50.0	251	< 50.0	564	23,300	< 500	23,600	NA	NA	< 500	196	< 50.0	59.3
									39.6	NA				
									77.2	NA				
< 30.0 M	< 75.0 M	< 70.0 M	380 J	< 60.0 M	1,100	45,100	< 100 M	45,100	NA	NA	< 295 M	< 75.0 M	< 50.0 M	< 85.0 M
< 60.0 M	< 150 M	< 140 M	< 50.0 M	< 120 M	1,820	47,800	< 200 M	47,800	98.0	NA	< 590 M	< 150 M	< 100 M	< 170 M
< 60.0 M	< 150 M	< 140 M	< 50.0 M	< 120 M	1,830	46,300	< 200 M	46,300	NA	NA	< 590 M	< 150 M	< 100 M	< 170 M
< 60.0 M	< 150 M	< 140 M	358 J	< 120 M	1,920	48,100	259 J	48,300	81.6	NA	< 590 M	< 150 M	< 100 M	< 170 M
< 60.0 M	< 150 M	< 140 M	331 J	< 120 M	1,670	46,800	< 200 M	46,800	NA	NA	< 590 M	806 J	< 100 M	< 170 M
< 79.0 M	< 420 M	< 100 M	358 J	< 140 M	1,750	51,500	260 J	51,800	118	NA	1,150 J	< 270 M	< 220 M	< 140 M
< 79.0 M	< 420 M	< 100 M	396 J	< 140 M	1,690	48,600	265 J	48,800	NA	NA	853 J	< 270 M	< 220 M	< 140 M
< 88.0 M	< 380 M	< 170 M	< 98.0 M	< 230 M	< 210 M	37,500	< 150 M	37,700	NA	NA	< 2400 M	< 810 M	< 150 M	< 180 M
< 5	< 5	< 5	< 5	< 5	< 5	233	< 5	235	NA	NA	< 50	18.5	< 5	< 5
< 5	< 5	< 5	< 5	< 5	< 5	311	< 5	313	NA	NA	< 50	5.7	< 5	< 5
< 1	< 1	< 1	3.4	< 1	6.7	332	1.9	335	NA	NA	< 10	1.9	< 1	< 1
< 10	< 10	< 10	< 10	< 10	< 10	470	< 10	472	NA	NA	< 100	< 10	< 10	< 10
< 10	< 10	< 10	< 10	< 10	< 10	589	< 10	592	NA	NA	< 100	< 10	< 10	< 10
< 50	< 50	< 50	< 50	< 50	< 50	2,050	< 50	2,050	< 15	NA	< 500	< 50	< 50	< 50
< 50	< 50	< 50	< 50	< 50	< 50	993	116	1,110	NA	5.3	< 500	< 50	< 50	< 50
< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	1,610	< 25.0	1,610	7.2	NA	< 250	< 25.0	< 25.0	< 25.0
< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	25.9	1,810	99.4	1,910	7.9	NA	< 250	< 25.0	< 25.0	< 25.0
< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	1,430	79.0	1,510	NA	NA	< 250	< 25.0	< 25.0	< 25.0
< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	1,970	< 25.0	1,980	NA	NA	< 250	< 25.0	< 25.0	< 25.0
< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	< 25.0	1,310	< 25.0	1,310	NA	NA	< 250	< 25.0	< 25.0	< 25.0

Benzene	Chloro-ethane	Chloro-form	1,1-DCA	1,2-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	PCE	Toluene
5	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	5	1,000
5	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	5	1,000
<1.0	<1.0	<1.0	10.6	<1.0	18.5	686	19.2	696	<3.0 UJ	NA	<10.0	<1.0	<1.0	<1.0
<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	1,010 J	<20.0	1,010	NA	NA	<200	21.1	<20.0	<20.0
<1.0	<1.0	<1.0	13.0	<1.0	15.9	679	12.4	686	NA	NA	<10.0	<1.0	<1.0	<1.0
<10.0	<10.0	<10.0	11.4	<10.0	17.6	708	<10.0	713	NA	NA	<100	<10.0	<10.0	<10.0
<10.0	<10.0	<10.0	12.4	<10.0	10.8	693	<10.0	697	NA	NA	<100	<10.0	<10.0	<10.0
<1.0	<1.0	<1.0	12.9	<1.0	14.9	655	42.3	655	NA	NA	<10.0	<1.0	<1.0	<1.0
<10.0	<10.0	<10.0	11.9	<10.0	14.5	633	35.5	669	<2.0	NA	<100	<10.0	<10.0	<10.0
<0.60 M	<1.5 M	<1.4 M	9.1 J	<1.2 M	9.9 J	505	3.5 J	509	NA	NA	<5.9 M	<1.5 M	<1.0 M	<1.7 M
<0.60 M	<1.5 M	<1.4 M	<0.50 M	<1.2 M	12.6	956	<2.0 M	962	<3.0	NA	<5.9 M	<1.5 M	<1.0 M	<1.7 M
<0.60 M	<1.5 M	<1.4 M	12.5	<1.2 M	12.0	966	5.9 J	972	NA	NA	<5.9 M	<1.5 M	<1.0 M	<1.7 M
<1.0	<1.0	<1.0	16.0	<1.0	18.4	1,270 J	20.8	1,270 J	NA	NA	<10.0	<1.0	<1.0	<1.0
<0.60 M	<1.5 M	<1.4 M	15.0	<1.2 M	13.3	1,240	7.4 J	1,240	<3.0 UJ	NA	<5.9 M	4.5 J	<1.0 M	<1.7 M
<10.0 M	<1.5 M	<1.4 M	28.9	<10.0 M	33.1 J	2,920	<10.0 M	2,940	NA	NA	<5.9 M	<10.0 M	<1.0 M	<10.0 M
<4.0 M	<21.0 M	<5.0 M	33.3 J	<7.0 M	44.5 J	3,750	19.6 J	3,770	<3.0	NA	<35.0 M	<13.5 M	<11.0 M	<7.0 M
<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	NA	NA	<10.0	<1.0	<1.0	<1.0
<1.0	<1.0	<1.0	1.0	<1.0	<1.0	58.1	1.4	59.5	NA	NA	<10.0	<1.0	<1.0	1.6
<1.0	<1.0	<1.0	<1.0	<1.0	1.1	46.8	<1.0	46.8	NA	NA	<10.0	1.7	<1.0	<1.0
<1.0	<1.0	<1.0	1.0	<1.0	1.2	65.3	<1.0	65.6	NA	NA	<10.0	<1.0	<1.0	<1.0
<1.0	<1.0	<1.0	1.4	<1.0	2.6	70.2	<1.0	70.2	NA	NA	<10.0	4.0	<1.0	<1.0
<1.0	<1.0	<1.0	1.1	<1.0	1.5	45.3	1.3	46.5	<2.0	NA	<10.0	2.6	<1.0	<1.0
0.11 J	<1.0	<1.0	1.3	<1.0	2.1	61.7	0.27 J	61.9	NA	NA	<10.0	1.9	0.28 J	<1.0
<1.0	<1.0	<1.0	2.0	<1.0	6.7	179	<1.0	180	<3.0	NA	<10.0	1.3	<1.0	<1.0
<0.60 M	<1.5 M	<1.4 M	<0.50 M	<1.2 M	<2.0 M	86.4	<2.0 M	86.4	NA	NA	<5.9 M	<1.5 M	<1.0 M	<1.7 M
<1.0	<1.0	1.4	3.3	<1.0	6.3	131 J	<1.0	131 J	<3.0 UJ	NA	<10.0	4.4	<1.0	<1.0
0.52 J	<5.0	2.0 J	4.6 J	<5.0	12.8	424	<5.0	424	NA	NA	<50.0	7.2	<5.0	0.90 J
<5.0	<5.0	2.7 J	7.6	<5.0	42.2	333	<50.0	333	<3.0	NA	9.4 J	2.6 J	<5.0	0.95 J
<0.88 M	<3.8 M	<1.7 M	<0.98 M	<2.3 M	48.1	1,200	<1.5 M	1,210	NA	NA	<24.0 M	<8.1 M	<1.5 M	<1.8 M
<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	31.7	<1.0	32.4	NA	NA	<10.0	52.5	<1.0	1.3
<1.0	<1.0	<1.0	<1.0	<1.0	2.0	44.1	2.9	47.0	NA	NA	<10.0	<1.0	<1.0	<1.0
<1.0	<1.0	2.4	6.2	<1.0	36.3	157	1.3	157	NA	NA	<10.0	2.2	<1.0	<1.0
<50.0	<50.0	<50.0	<50.0	<50.0	<50.0	177	<50.0	177	NA	NA	<500	<50.0	<50.0	<50.0
<10.0	<10.0	<10.0	<10.0	<10.0	40.4	268	<10.0	277	<2.0	NA	<100	93.8	<10.0	<10.0
0.10 J	<1.0	<1.0	2.2	<1.0	2.6	73.4	<1.0	73.4	NA	NA	<10.0	1.7 J	<1.0	<1.0
<3.0 M	<7.5 M	<7.0 M	<2.5 M	<6.0 M	<10.0 M	421	<10.0 M	421	<3.0	NA	<29.5 M	<7.5 M	<5.0 M	<8.5 M
<1.2 M	<3.0 M	20.9	19.6 J	<2.4 M	66.8	794	<4.0 M	794	NA	NA	<11.8 M	70.4	<2.0 M	<3.4 M
<1.0	1.7	2.5	8.3	<1.0	9.7	866	<1.0	866	<3.0	NA	<10.0	29.9	<1.0	<1.0
<1.0	2.0	2.9	9.5	<1.0	11.5	214	<10.0	214	NA	NA	<10.0	21.7	<1.0	<1.0
<5.0	<5.0	5.6	21.5	1.2 J	66.6	1,240	<100	1,300	<3.0	NA	11.5 J	66.9	<5.0	1.9 J
<0.88 M	<3.8 M	<1.7 M	<0.98 M	<2.3 M	<2.1 M	247	<1.5 M	247	NA	NA	<24.0 M	<8.1 M	<1.5 M	<1.8 M



Benzene	Chloro-ethane	Chloro-form	1,1-DCA	1,2-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	PCE	Toluene
5	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	5	1,000
5	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	5	1,000
<1.0	<1.0	<1.0	2.3	<1.0	<1.0	120	3.0	123	<3.0 UJ	NA	<10.0	<1.0	<1.0	2.1
<1.0	<1.0	<1.0	1.1	<1.0	<1.0	69.5	<1.0	69.8	NA	NA	<10.0	3.0	<1.0	1.7
<1.0	<1.0	<1.0	1.1	<1.0	1.2	71.5	<1.0	71.9	NA	NA	<10.0	1.2	<1.0	1.2
<1.0	<1.0	<1.0	1.0	<1.0	1.6	62.0	<1.0	62.0	NA	NA	<10.0	5.2	<1.0	<1.0
<1.0	<1.0	<1.0	<1.0	<1.0	1.4	54.6	4.6	59.2	<2.0	NA	<10.0	5.1	<1.0	<1.0
0.10 J	1.8	<1.0	1.6	<1.0	3.8	143	0.28 J	143	NA	NA	<10.0	4.3	<1.0	0.23 J
<1.0	2.4	<1.0	2.3	<1.0	6.1	407	<10.0	407	<3.0	NA	<10.0	2.2	<1.0	<1.0
<0.60 M	<1.5 M	<1.4 M	<0.50 M	<1.2 M	6.7 J	317	<2.0 M	317	NA	NA	<5.9 M	7.0 J	<1.0 M	<1.7 M
<0.60 M	<1.5 M	1.8 J	2.9 J	<1.2 M	5.0 J	384	<2.0 M	384	<3.0	NA	<5.9 M	12.1	<1.0 M	<1.7 M
<0.60 M	<1.5 M	2.9 J	2.8 J	<1.2 M	6.3 J	281	<2.0 M	281	NA	NA	<5.9 M	8.8 J	<1.0 M	2.3 J
<0.79 M	<4.2 M	2.7 J	2.6 J	<1.4 M	5.6 J	225	<1.7 M	225	<3.0	NA	40.2 J	<2.7 M	<2.2 M	<1.4 M
<0.44 M	<1.9 M	<0.85 M	<0.49 M	<1.2 M	9.3	691	<0.75 M	691	NA	NA	<12.0 M	6.4	<0.75 M	<0.90 M
<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	28.9	1.1	30.0	4.9 J	NA	<10.0	<1.0	<1.0	<1.0
<1.0	<1.0	<1.0	3.0	<1.0	1.1	163	<1.0	163	NA	NA	<10.0	2.7	<1.0	1.6
<1.0	3.4	<1.0	3.8	<1.0	2.1	336	1.5	337	NA	NA	<10.0	<1.0	<1.0	1.5
<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	101	<5.0	101	NA	NA	<50.0	9.2	<5.0	<5.0
<5.0	14.7	<5.0	<5.0	<5.0	<5.0	576	10.5	586	5.5	NA	<50.0	<5.0	<5.0	<5.0
<0.30 M	<0.75 M	<0.70 M	1.5 J	<0.60 M	2.9 J	91.3	<1.0 M	91.3	NA	NA	<3.0 M	<0.75 M	<0.50 M	<0.85 M
<5.0	<5.0	<5.0	<5.0	<5.0	5.4	941	<5.0	943	3.9	NA	<50.0	<5.0	<5.0	<5.0
<0.60 M	<1.5 M	<1.4 M	<0.50 M	<1.2 M	<2.0 M	563	<10.0 M	563	NA	NA	<5.9 M	<1.5 M	<1.0 M	<1.7 M
<1.5 M	<3.8 M	<3.5 M	4.8 J	<3.0 M	8.5 J	2,150	<5.0 M	2,150	5.9	NA	<14.8 M	11.2 J	<2.5 M	<4.2 M
<0.30 M	6.7	1.9 J	5.3	2.4 J	11.3	339	<5.0 M	339	NA	NA	<3.0 M	12.4	<0.50 M	1.0 J
1.3 J	7.2 J	2.3 J	4.4 J	<1.4 M	10.5	1,960	2.8 J	1,960	4.3	NA	14.9 J	3.6 J	<2.2 M	2.3 J
<0.88 M	<3.8 M	<1.7 M	10.6	<2.3 M	20.2	3,590	<15.0 M	3,590	NA	NA	<24.0 M	<8.1 M	<1.5 M	<1.8 M
<1.2 M	<3.0 M	<2.8 M	<25.0 M	<2.4 M	20.3 J	3,140	<100 M	3,260	<3.0	NA	<11.8 M	254	<2.0 M	65.9 J
<30.0 M	<75.0 M	<70.0 M	<25.0 M	<60.0 M	<100 M	7,420	<100 M	7,620	NA	NA	<295 M	<75.0 M	<50.0 M	<85.0 M
<30.0 M	<75.0 M	<70.0 M	<25.0 M	<60.0 M	<100 M	10,300	116 J	10,500	NA	NA	<295 M	<75.0 M	<50.0 M	<85.0 M
<30.0 M	<75.0 M	<70.0 M	<25.0 M	<60.0 M	<100 M	16,300	<100 M	16,700	NA	NA	<295 M	<75.0 M	<50.0 M	<85.0 M
<12.0 M	<30.0 M	<28.0 M	<10.0 M	<24.0 M	<40.0 M	11,200	113 J	11,300	NA	NA	<118 M	133 J	<20.0 M	<34.0 M
<15.8 M	<84.0 M	<20.0 M	<19.4 M	<28.0 M	<44.0 M	10,400	120 J	10,500	NA	NA	<140 M	<54.0 M	<44.0 M	<28.0 M
<39.5 M	<210 M	<50.0 M	<48.5 M	<70.0 M	<110 M	106,000	1,570	108,000	NA	NA	<350 M	<135 M	<110 M	<70.0 M
<15.8 M	<84.0 M	<20.0 M	<19.4 M	<28.0 M	<44.0 M	108,000	1,700	109,000	NA	NA	<140 M	<54.0 M	<44.0 M	<28.0 M
<17.6 M	<76.0 M	<34.0 M	<19.6 UJ	<46.0 M	<42.0 M	6,390	72.6 J	6,470	NA	NA	<480 M	<162 M	<30.0 M	<200 M
0.81 J	4.1 J	<1.0	200	0.96 J	54.2	2,580	18.0 J	2,590	<3.0	NA	<10.0	11.9	2.8	2.3
0.78 J	6.2 J	<1.0	193	0.82 J	55.1	2,640	22.5 J	2,660	<3.0	NA	<10.0	11.6	2.3	1.9
<3.0 M	<7.5 M	<7.0 M	272	<6.0 M	<10.0 M	3,940	<10.0 M	3,960	NA	NA	<29.5 M	<7.5 M	<5.0 M	<8.5 M
<3.0 M	<7.5 M	<7.0 M	208	<6.0 M	42.7 J	3,280	25.6 J	3,310	NA	NA	<29.5 M	<7.5 M	<5.0 M	<8.5 M
<3.0 M	<7.5 M	<7.0 M	156	<6.0 M	50.1	3,460	68.5	3,530	NA	NA	<29.5 M	<7.5 M	<5.0 M	<8.5 M
<3.0 M	<7.5 M	<7.0 M	191	7.4 J	41.4 J	3,220	23.3 J	3,240	NA	NA	<29.5 M	37.8 J	<5.0 M	<8.5 M
<4.0 M	<21.0 M	<5.0 M	178	8.2 J	60.5	3,720	<8.5 M	3,750	NA	NA	<35.0 M	<13.5 M	<11.0 M	<7.0 M
<4.0 M	<21.0 M	<5.0 M	171	<7.0 M	50.9	3,900	26.5 J	3,930	NA	NA	<35.0 M	<13.5 M	<11.0 M	<7.0 M
<4.4 M	<19.0 M	<8.5 M	264	<11.5 M	<10.5 M	1,540	<7.5 M	1,550	NA	NA	358 J	<40.5 M	<7.5 M	<9.0 M

Benzene	Chloro-ethane	Chloro-form	1,1-DCA	1,2-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	PCE	Toluene
5	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	5	1,000
5	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	5	1,000
<1.2 M	<3.0 M	<2.8 M	309 J	<2.4 M	394	18,100	<200 M	18,100	9.7	NA	<11.8 M	427	43.3	1,130
<60.0 M	<150 M	<140 M	<50.0 M	<120 M	<200 M	51,100	<200 M	51,100	NA	NA	<590 M	<150 M	<100 M	2,080
<300 M	<750 M	<700 M	<250 M	<600 M	<1000 M	87,600	<1000 M	87,600	NA	NA	<2950 M	<750 M	<500 M	2,240 J
<30.0 M	<75.0 M	<70.0 M	311 J	<60.0 M	128 J	18,400	<100 M	18,500	NA	NA	<295 M	<75.0 M	<50.0 M	341 J
<30.0 M	<75.0 M	<70.0 M	187 J	<60.0 M	<100 M	10,200	<100 M	10,200	NA	NA	<295 M	394 J	<50.0 M	106 J
<39.5 M	<210 M	<50.0 M	263 J	<70.0 M	140 J	24,000	134 J	24,200	NA	NA	<350 M	<135 M	<110 M	<70.0 M
<7.9 M	<42.0 M	<10.0 M	138	<14.0 M	50.1 J	10,800	52.2 J	10,900	NA	NA	<70.0 M	<27.0 M	<22.0 M	14.7 J
<0.88 M	<3.8 M	<1.7 M	548 J	<2.3 M	<2.1 M	91.5	111	203	NA	NA	45.2 J	<8.1 M	<1.5 M	110
2.5	<1.0	1.3	1,420	5.6	240 J	46,800	227 J	47,000	27.1	NA	<10.0	149	65.9	37.2
<30.0 M	<75.0 M	<70.0 M	4,720	<60.0 M	<100 M	123,000	<200 M	123,000	NA	NA	<295 M	1,110	<50.0 M	<85.0 M
<60.0 M	<150 M	<140 M	3,070	<120 M	350 J	92,700	362 J	93,000	NA	NA	<590 M	<150 M	<100 M	<170 M
<3.0 M	<7.5 M	<7.0 M	168	<6.0 M	44.4 J	3,330	42.8 J	3,370	NA	NA	<29.5 M	<7.5 M	<5.0 M	<8.5 M
<3.0 M	<7.5 M	<7.0 M	1,240	<6.0 M	174	44,100	<100 M	44,300	NA	NA	<29.5 M	<7.5 M	<5.0 M	<8.5 M
<39.5 M	<210 M	<50.0 M	1,300	<70.0 M	191 J	49,100	203 J	49,300	NA	NA	<350 M	<135 M	<110 M	<70.0 M
<39.5 M	<210 M	<50.0 M	543	<70.0 M	<110 M	21,900	112 J	22,000	NA	NA	388 J	<135 M	<110 M	<70.0 M
<4.4 M	<19.0 M	<8.5 M	860 J	<11.5 M	<10.5 M	2,610	14.3 J	2,620	NA	NA	332 J	<40.5 M	<7.5 M	<9.0 M

rentiated)

Compounds with more than one detection in at least one well are shown

Bold numbers indicate concentration above reporting limit

Shaded value indicates concentration above one or more screening levels:

WQS - MDNR Water Quality Standard-Groundwater, Jan 2014

MCL - Maximum Contaminant Level

NE - no standard established

NA - not analyzed

DCA - Dichloroethane

DCE - Dichloroethene

t - trans-1,2 isomer

c - cis-1,2 isomer

N - normal field sample

FD - field duplicate sample

J - estimated value

M - below detection limit

MEK - Methyl-Ethyl-Ketone (2-Butanone)

PCE - Tetrachloroethene

TCA - Trichloroethane

TCE - Trichloroethene

UFSB

[illegible]





Line	Chloro-ethane	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	1,1,1-TCA	1,1,2-TCA	TCE
	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
0	<1	<1	<1	<1	8.3	<1	8.3	NA	NA	<10	<1	<1	<1	15.6
0	<1	<1	<1	<1	3.4	<1	3.4	NA	NA	<10	<1	<1	<1	7.7
0	<1	<1	<1	<1	8.7	<1	8.9	NA	NA	<10	<1	<1	<1	14.1
0	<1	<1	<1	<1	7.0	<1	7.0	NA	NA	<10	<1	<1	<1	16.5
0	<1	<1	<1	<1	6.0	<1	6.0	NA	NA	<10	<1	<1	<1	16.3
0	<1	<1	<1	<1	4.1	<1	4.1	<3.0	NA	<10	<1	<1	<1	11.4
0	<1	<1	<1	<1	3.7	<1	4.2	NA	<3.0	<10	<1	<1	<1	10.2
0	<1.0	<1.0	<1.0	<1.0	2.4	<1.0	2.4	<3.0	NA	<10.0	<1.0	<1.0	<1.0	7.5
0	<1.0	<1.0	<1.0	<1.0	3.5	<1.0	3.5	<3.0	NA	<10.0	<1.0	<1.0	<1.0	11.8
0	<1.0	<1.0	<1.0	<1.0	2.7	<1.0	2.7	NA	NA	<10.0	<1.0	<1.0	<1.0	8.8
5	<1.0	<1.0	<1.0	<1.0	2.6	<1.0	2.6	NA	NA	<10.0	<1.0	<1.0	<1.0	7.7
0	<1.0	<1.0	<1.0	<1.0	11.3	<1.0	11.3	NA	NA	<10.0	<1.0	<1.0	<1.0	19.5
0	<1.0	<1.0	<1.0	<1.0	6.3	<1.0	6.3	NA	NA	<10.0	<1.0	<1.0	<1.0	9.8
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	<10.0	<1.0	<1.0	<1.0 UJ	5.5
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0 UJ	5.1
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	7.0
0	<1.0	<1.0	<1.0	<1.0	2.3	<1.0	2.3	NA	NA	<10.0	<1.0	<1.0	<1.0	10.6
0	<1.0	<1.0	<1.0	<1.0	2.5	<1.0	2.5	NA	NA	<10.0	<1.0	<1.0	<1.0	11.3
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	4.1
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	NA	<10.0	<1.0 UJ	<1.0	<1.0	3.3
0	<1.0	<1.0	<1.0	<1.0	0.59 J	<1.0	0.59 J	NA	NA	<10.0	<1.0	<1.0	<1.0	3.7
0	<1.0	<1.0	<1.0	<1.0	1.6	<1.0	1.6	<3.0	NA	<10.0	<1.0	<1.0	<1.0	7.3
0	<1.0	<1.0	<1.0	<1.0	1.7	<1.0	1.7	<3.0	NA	<10.0	<1.0	<1.0	<1.0	7.0
0	<1.0	<1.0	<1.0	<1.0	3.9	<1.0	3.9	NA	NA	<10.0	<1.0	<1.0	<1.0	12.5
A	NA	NA	NA	NA	NA	NA	NA	<3.0	NA	NA	NA	NA	NA	NA
0	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	1.2	<3.0	NA	<10.0	<1.0	<1.0	<1.0	4.2
0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	1.1	NA	NA	<10.0	<1.0	<1.0	<1.0	4.9
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	<10.0	<1.0	<1.0	<1.0	4.7
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	<10.0	<1.0	<1.0	<1.0	4.7
0	<1.0	<1.0	<1.0	<1.0	20.4	<1.0	20.4	NA	NA	<10.0	<1.0	<1.0	<1.0	32.3
0	<1.0	1.7	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	1.3	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0 UJ	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	<10.0	<1.0	<1.0	<1.0	<1.0

Line	Chloro-ethane	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	1,1,1-TCA	1,1,2-TCA	TCE
	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
0	<1	<1	<1	2.3	159	1.6	161	NA	NA	<10	<1	<1	<1	6,120
0	<25	26.9	<25	<25	93.9	<25	93.9	NA	NA	<250	26.4	<25	<25	3,620
0	<25	<25	<25	<25	496	<25	501	NA	NA	<250	<25	<25	<25	15,300
0	<100	<100	<100	<100	380	<100	380	NA	NA	<1000	<100	<100	<100	7,110
0	<100	<100	<100	<100	126	<100	126	NA	NA	<1000	<100	<100	<100	4,410
0	<20	<20	<20	<20	54.7	<20	54.7	<6.0	NA	<200	<20	<20	<20	1,990
0	<20	<20	<20	<20	106	<20	120	NA	<3.0	<200	<20	<20	<20	3,810
0	<10.0	<10.0	<10.0	<10.0	42.0	<10.0	42.0	<3.0	NA	<100	<10.0	<10.0	<10.0	1,080
0	<10.0	<10.0	<10.0	<10.0	30.5	<10.0	30.5	<3.0	NA	<100	<10.0	<10.0	<10.0	1,050
0	<10.0	<10.0	<10.0	<10.0	48.6	<10.0	52.9	NA	NA	<100	<10.0	<10.0	<10.0	1,870
0	<20.0	<20.0	<20.0	<20.0	102	<20.0	102	NA	NA	<200	<20.0	<20.0	<20.0	3,070
0	<25.0	<25.0	<25.0	<25.0	121	<25.0	121	NA	NA	<250	<25.0	<25.0	<25.0	3,280
0	<25.0	<25.0	<25.0	<25.0	49.0	<25.0	49.0	<3.0	NA	<250	<25.0	<25.0	<25.0	1,610
0	<25.0	<25.0	<25.0	<25.0	34.5	<25.0	34.5	NA	NA	<250	<25.0	<25.0	<25.0	1,440
0	<25.0	<25.0	<25.0	<25.0	106	<25.0	106	NA	NA	<250	<25.0	<25.0	<25.0	3,420
0	<25.0	<25.0	<25.0	<25.0	1,060 J	<25.0	1,060 J	NA	NA	500	<25.0	<25.0	<25.0	171 J
0	<50.0	<50.0	<50.0	<50.0	5,900 J	<50.0	5,910 J	NA	NA	<500	<50.0	<50.0	<50.0	327 J
0	<10.0	<10.0	<10.0	<10.0	504	15.8	520	NA	NA	266	<10.0	<10.0	<10.0	62.1 J
0	<10.0	<10.0	<10.0	<10.0	490	<10.0	493	<2.0	NA	254	<10.0	<10.0	<10.0	34.1 J
7	<1.0	<1.0	<1.0	<1.0	14.5	0.39 J	14.9	NA	NA	258	<1.0	<1.0	<1.0	1.8
9	<1.0	<1.0	<1.0	<1.0	10.8	<1.0	11.6	NA	NA	70.6	<1.0	<1.0	<1.0	<1.0
3	<1.0	<1.0	<1.0	<1.0	9.3	<1.0	10.0	<3.0	NA	69.4	<1.0	<1.0	<1.0	<1.0
5	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	1.6	NA	NA	10.6	<1.0	<1.0	<1.0	<1.0
9	2.1	<1.0	<1.0	<1.0	5.5	<1.0	6.1	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
5	1.6	<1.0	<1.0	<1.0	5.3	<1.0	6.1	<3.0	NA	<10.0	<1.0	<1.0	<1.0	<1.0
9 J	<1.0	<1.0	<1.0	<1.0	3.6	<1.0	4.3	NA	NA	<10.0	<1.0	<1.0	<1.0	1.7
0	2.3	<1.0	<1.0	<1.0	<1.0	<1.0	1.3	<3.0	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	1.9	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0

Line	Chloro-ethane	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	1,1,1-TCA	1,1,2-TCA	TCE
	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
0	<2	<2	<2	2.1	128	<2	129	NA	NA	<20	<2	<2	<2	354
0	<2	<2	<2	<2	89.1	<2	90.2	NA	NA	<20	<2	<2	<2	274
0	<2	<2	<2	2.7	391	2.6	394	NA	NA	<20	<2	<2	<2	467
0	<5	<5	<5	<5	215	<5	219	NA	NA	<50	17.0	<5	<5	281
0	<5	<5	<5	<5	101	<5	103	NA	NA	<50	<5	<5	<5	244
0	<5	<5	<5	<5	96.2	<5	98.9	<3.0	NA	<50	<5	<5	<5	269
0	<1	<1	<1	2.7	138	9.5	148	NA	<3.0	<10	<1	<1	<1	341
0	<5.0	<5.0	<5.0	<5.0	102	<5.0	102	<3.0	NA	<50.0	<5.0	<5.0	<5.0	399
0	<5.0	<5.0	<5.0	<5.0	93.6	<5.0	94.8	NA	NA	<50.0	<5.0	<5.0	<5.0	367
0	<5.0	<5.0	<5.0	<5.0	76.2	6.1	82.3	<3.0	NA	<50.0	<5.0	<5.0	<5.0	261
0	<5.0	<5.0	<5.0	<5.0	80.6	6.9	87.4	NA	NA	<50.0	<5.0	<5.0	<5.0	395
0	<5.0	<5.0	<5.0	<5.0	280	5.6	286	NA	NA	<50.0	<5.0	<5.0	<5.0	401
0	<5.0	<5.0	<5.0	<5.0	155	<5.0	155	NA	NA	<50.0	<5.0	<5.0	<5.0	286
0	<5.0	<5.0	<5.0	<5.0	76.1	<5.0	80.1	NA	NA	<50.0	<8.7	<5.0	<5.0	238
0	<5.0	<5.0	<5.0	<5.0	87.1	5.9	93.0	NA	NA	<50.0	<5.0	<5.0	<5.0	219
0	<1.0	<1.0	<1.0	2.0	148	1.2	149	NA	NA	<10.0	<1.0	<1.0	<1.0	199
0	<5.0	<5.0	<5.0	<5.0	138	<5.0	138	NA	NA	<50.0	<5.0	<5.0	<5.0	198
9	<5.0	<5.0	<5.0	<5.0	27.2	<5.0	27.2	NA	NA	652 J	<5.0	<5.0	<5.0	<5.0
7 J	<5.0	<5.0	<5.0	<5.0	8.7	<5.0	8.7	NA	NA	1,480 J	<5.0	<5.0	<5.0	<5.0
5	<5.0	<5.0	<5.0	<5.0	12.3	<5.0	12.3	NA	NA	1,010	<5.0	<5.0	<5.0	0.88 J
3	<1.0	<1.0	<1.0	<1.0	14.1	<1.0	14.1	NA	NA	94.9	<1.0	<1.0	<1.0	<1.0
1	<1.0	<1.0	<1.0	<1.0	91.7	<1.0	92.4	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
5	<1.0	<1.0	<1.0	<1.0	90.7	1.8	92.5	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
5	<1.0	<1.0	<1.0	<1.0	66.3	1.3	67.6	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	660	<10.0	663	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
0 M	<4.2 M	<1.0 M	<0.97 M	<2.2 M	438	4.4 J	443	NA	NA	<7.0 M	3.6 J	<1.2 M	<1.0 M	1.8 J
0 M	<3.8 M	<1.7 M	<0.98 M	<2.1 M	825	4.6 J	830	NA	NA	<24.0 M	<8.1 M	<1.3 M	<2.8 M	<2.5 M









ne	Chloro-ethane	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	1,1,1-TCA	1,1,2-TCA	TCE
	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
0	<10	<10	<10	<10	211	<10	213	NA	NA	<100	<10	<10	<10	546
0	<1	<1	<1	2.2	396	3.6	400	NA	NA	<10	<1	<1	<1	556
0	<10	<10	<10	<10	684	<10	692	NA	NA	<100	<10	<10	<10	167
0	<10	<10	<10	<10	262	<10	262	NA	NA	<100	22.5	<10	<10	746
0	<10	<10	<10	<10	217	<10	217	NA	NA	<100	<10	<10	<10	620
0	<10	<10	<10	<10	295	<10	300	<3.0	NA	<100	<10	<10	<10	777
0	<10	<10	<10	<10	411	18.9	430	NA	<3.0	<100	<10	<10	<10	354
0	<10.0	<10.0	<10.0	<10.0	148	<10.0	148	<3.0	NA	<100	<10.0	<10.0	<10.0	729
0	<10.0	<10.0	<10.0	<10.0	503	23.2	526	<3.0	NA	<100	<10.0	<10.0	<10.0	348
0	<1.0	<1.0	<1.0	2.1	449	39.2	489	NA	NA	<10.0	<1.0	<1.0	<1.0	349
0	<10.0	<10.0	<10.0	<10.0	308	22.4	331	NA	NA	<100	<10.0	<10.0	<10.0	415
0	<10.0	<10.0	<10.0	<10.0	384	<10.0	387	NA	NA	<100	<10.0	<10.0	<10.0	236
0	<5.0	<5.0	<5.0	<5.0	158	<5.0	158	NA	NA	<50.0	<5.0	<5.0	<5.0	571
0	<5.0	<5.0	<5.0	<5.0	222	10.3	233	<3.0	NA	<50.0	<5.0	<5.0	<5.0	757
0	<5.0	<5.0	<5.0	<5.0	466	40.0	506	NA	NA	<50.0	<5.0	<5.0	<5.0	218
0	<5.0	<5.0	<5.0	<5.0	186	<5.0	187	NA	NA	<50.0	<5.0	<5.0	<5.0	685
0	<5.0	<5.0	<5.0	<5.0	291	<5.0	295	NA	NA	<50.0	<5.0	<5.0	<5.0	580
0	<5.0	<5.0	<5.0	<5.0	228	<5.0	231	<3.0	NA	<50.0	7.6	<5.0	<5.0	509
0	<5.0	<5.0	<5.0	1.0 J	178	1.7 J	180	NA	NA	<50.0	<5.0	<5.0	<5.0	495
0	<5.0	<5.0	<5.0	<5.0	239	<5.0	241	<3.0	NA	<50.0	<5.0	<5.0	<5.0	455
0	<5.0	<5.0	<5.0	<5.0	242	1.5 J	243	NA	NA	<50.0	<5.0	<5.0	<5.0	227
0	<5.0	<5.0	<5.0	<5.0	221	<5.0	224	<3.0	NA	<50.0	<5.0	<5.0	<5.0	240
0	<5.0	<5.0	<5.0	<5.0	229	<5.0	231	NA	NA	<50.0	<5.0	<5.0	<5.0	372
0	<5.0	<5.0	<5.0	<5.0	125	1.1 J	126	<3.0	NA	<50.0	<5.0	<5.0	<5.0	257
5 M	<1.9 M	<0.85 M	<0.49 M	<1.0 M	159	0.75 J	160	NA	NA	<12.0 M	<4.0 M	<0.65 M	<1.4 M	195

[illegible]



ne	Chloro-ethane	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	1,1,1-TCA	1,1,2-TCA	TCE
	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
0	<1	<1	<1	<1	105	<1	106	NA	NA	<10	<1	<1	<1	138
0	<1	<1	<1	<1	92.0	<1	92.6	NA	NA	<10	<1	<1	<1	117
0	<1	<1	<1	<1	114	<1	115	NA	NA	<10	<1	<1	<1	124
0	<1	<1	<1	<1	108	<1	109	NA	NA	<10	<1	<1	<1	104
0	<1	<1	<1	<1	114	<1	115	NA	NA	<10	<1	<1	<1	130
0	<1	<1	<1	<1	90.0	1.9	91.9	<3.0	NA	<10	<1	<1	<1	98.8
0	<1	<1	<1	<1	83.7	9.0	92.7	NA	<3.0	<10	<1	<1	<1	99.0
0	<1.0	<1.0	<1.0	<1.0	90.5	<1.0	91.2	<3.0	NA	<10.0	<1.0	<1.0	<1.0	106
0	<1.0	<1.0	<1.0	<1.0	81.4	3.6	85.0	<3.0	NA	<10.0	<1.0	<1.0	<1.0	89.1
0	<1.0	<1.0	<1.0	<1.0	71.7	5.5	77.2	NA	NA	<10.0	<1.0	<1.0	<1.0	78.9
0	<1.0	<1.0	<1.0	<1.0	68.1	5.3	73.4	NA	NA	<10.0	<1.0	<1.0	<1.0	73.3
0	<1.0	<1.0	<1.0	<1.0	87.1	<1.0	87.6	NA	NA	<10.0	<1.0	<1.0	<1.0	87.2
0	<1.0	<1.0	<1.0	<1.0	99.1	<1.0	99.6	NA	NA	<10.0	<1.0	<1.0	<1.0	104
0	<1.0	<1.0	<1.0	<1.0	75.7	4.0	79.7	NA	NA	<10.0	<1.0	<1.0	<1.0	87.3
0	<1.0	<1.0	<1.0	<1.0	69.6	5.5	75.1	NA	NA	<10.0	<1.0	<1.0	<1.0	76.1
0	<1.0	<1.0	<1.0	<1.0	77.0	<1.0	77.4	NA	NA	<10.0	<1.0	<1.0	<1.0	72.5
0	<1.0	<1.0	<1.0	<1.0	37.6	<1.0	37.9	NA	NA	<10.0	<1.0	<1.0	<1.0	4.2
0	<1.0	<1.0	<1.0	<1.0	58.0	2.0	60.0	NA	NA	<10.0	<1.0	<1.0	<1.0	11.3
0	<1.0	<1.0	<1.0	0.32 J	67.5	0.65 J	68.1	NA	NA	<10.0	<1.0	<1.0	<1.0	20.0 J
0	<1.0	<1.0	<1.0	0.35 J	71.4	0.64 J	72.1	NA	NA	<10.0	<1.0	<1.0	<1.0	27.6 J
0	<1.0	<1.0	<1.0	<1.0	50.8	<1.0	51.2	NA	NA	<10.0	<1.0	<1.0	<1.0	27.2
0	<1.0	<1.0	<1.0	<1.0	64.6	<1.0	65.1	NA	NA	<10.0	<1.0	<1.0	<1.0	44.6
0	<1.0	<1.0	<1.0	<1.0	47.5	<1.0	47.8	NA	NA	<10.0	<1.0	<1.0	<1.0	44.1
0	<1.0	<1.0	<1.0	<1.0	56.2	<1.0	56.7	NA	NA	<10.0	<1.0	<1.0	<1.0	35.9
0	<1.0	<1.0	<1.0	<1.0	22.2	<1.0	22.4	NA	NA	<10.0	<1.0	<1.0	<1.0	23.1
0	<1.0	<1.0	<1.0	<1.0	26.3	<1.0	26.4	NA	NA	<10.0	<1.0	<1.0	<1.0	19.6

[illegible]

Sample Name	Chloro-ethane	Chloro-form	1,1-DCA	1,1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	1,1,1-TCA	1,1,2-TCA	TCE
Well 1	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
Well 2	NE	80	NE	7	70	100	NE	NE	NE	NE	5	200	5	5
Well 3	<5	<5	<5	<5	145	<5	147	NA	NA	<50	<5	<5	<5	237
Well 4	<5	<5	<5	<5	224	<5	224	NA	NA	<50	8.0	<5	<5	152
Well 5	<1	<1	<1	<1	135	<1	136	NA	NA	<10	<1	<1	<1	90.0
Well 6	<1	<1	<1	<1	65.5	<1	66.3	<3.0	NA	<10	<1	<1	<1	35.7
Well 7	<1	<1	6.4	14.7	539	35.0	539	NA	<3.0	<10	<1	31.9	1.0	670
Well 8	<1.0	<1.0	<1.0	1.1	84.6	<1.0	85.1	<3.0	NA	<10.0	<1.0	2.0	<1.0	79.7
Well 9	<1.0	<1.0	<1.0	2.0	117	4.6	122	<3.0	NA	<10.0	<1.0	4.0	<1.0	127
Well 10	<1.0	<1.0	<1.0	<1.0	63.2	4.9	68.0	NA	NA	<10.0	<1.0	<1.0	<1.0	36.7
Well 11	<1.0	<1.0	12.7	29.4	993	<25.0	1,010	NA	NA	<10.0	<1.0	61.4	1.7	1,210
Well 12	<1.0	<1.0	13.4	30.9	1,050	<25.0	1,070	NA	NA	<10.0	<1.0	65.4	2.2	1,290
Well 13	<5.0	<5.0	<5.0	<5.0	234	<5.0	234	NA	NA	<50.0	5.7	8.2	<5.0	256
Well 14	<1.0	1.7	<1.0	<1.0	63.3	2.1	65.5	NA	NA	<10.0	<1.0	1.5	<1.0	54.4
Well 15	<1.0	1.3	<1.0	1.0	61.6	5.1	66.7	NA	NA	<10.0	<1.0	2.1	<1.0	69.4
Well 16	<1.0	<1.0	19.9	54.5	1,940	29.1	1,950	NA	NA	<10.0	<1.0	99.9	3.0	2,820
Well 17	<1.0	<1.0	3.2	<1.0	104	<1.0	105	NA	NA	17.7	<1.0	<1.0	<1.0	<1.0
Well 18	2.4	<1.0	1.1	<1.0	6.7	<1.0	7.2	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
Well 19	2.3	<1.0	0.72 J	<1.0	1.8	0.25 J	2.0	NA	NA	<10.0	<1.0	<1.0	<1.0	0.48 J
Well 20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
Well 21	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
Well 22	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	1.2	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
Well 23	<1.0	<1.0	<1.0	<1.0	1.4	<1.0	1.4	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
Well 24	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
Well 25	<1.0	<1.0	<1.0	<1.0	1.6	<1.0	1.8	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0
Well 26	<1.0	<1.0	<1.0	<1.0	1.6	<1.0	1.8	NA	NA	<10.0	<1.0	<1.0	<1.0	<1.0

Differentiated)
 Compounds with more than one detection in at least one well are shown

Bold numbers indicate concentration above reporting limit

Shaded value indicates concentration above one or more screening levels:

WQS - MDNR Water Quality Standard-Groundwater, Jan 2014

MCL - Maximum Contaminant Level

NE - no standard established

NA - not analyzed

MEK - Methyl-Ethyl-Ketone (2-Butanone)

PCE - Tetrachloroethene

TCA - Trichloroethane

TCE - Trichloroethene

DCA - Dichloroethane

DCE - Dichloroethene

t - trans -1,2 isomer

c - cis-1,2 isomer

N - normal field sample

FD - field duplicate sample

J - estimated value

M - below detection limit

**TABLE 3****VOCs Summary - UFSB South Section Wells - FMSSE-1 through 24**

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	c-DCE	1,2-DCE (total)	1,1,1-TCA	TCE
MCL:			70	NE	200	5
WQS:			70	NE	200	5
SSC-15	3/1/2012	N	< 1	< 1	< 1	< 1
	5/3/2012	N	< 1	< 1	< 1	< 1
	8/30/2012	N	< 1	< 1	< 1	< 1
	11/13/2012	N	< 1	< 1	< 1	< 1
	3/1/2013	N	< 1	< 1	< 1	< 1
	6/25/2013	N	< 1	< 1	< 1	< 1
	9/24/2013	N	< 1	< 1	< 1	< 1
	12/17/2013	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/18/2014	N	< 1	< 1	< 1	< 1
	6/17/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/16/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	12/2/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/23/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	6/16/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/29/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	12/28/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/28/2016	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/12/2016	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/6/2017	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/2/2017	N	< 1.0	< 1.0	< 1.0	< 1.0
SSC-16	4/23/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/8/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/16/2019	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/1/2012	N	< 1	< 1	< 1	< 1
	5/3/2012	N	< 1	< 1	< 1	< 1
	11/13/2012	N	< 1	< 1	< 1	< 1
	3/1/2013	N	< 1	< 1	< 1	< 1
	6/26/2013	N	< 1	< 1	< 1	< 1
	9/25/2013	N	< 1	< 1	< 1	< 1
	12/17/2013	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/18/2014	N	< 1	< 1	< 1	< 1
	6/17/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/16/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	12/1/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/23/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	6/16/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/29/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	12/28/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/28/2016	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/12/2016	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/6/2017	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/2/2017	N	< 1.0	< 1.0	< 1.0	< 1.0
	4/23/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/8/2018	N	< 1.0	< 1.0	< 1.0	< 1.0



**TABLE 3****VOCs Summary - UFSB South Section Wells - FMSSE-1 through 24**

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	c-DCE	1,2-DCE (total)	1,1,1-TCA	TCE
MCL:			70	NE	200	5
WQS:			70	NE	200	5
SSC-17	2/26/2013	N	< 1	< 1	< 1	< 1
	12/19/2013	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/19/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	6/19/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/24/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	6/17/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	12/29/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/28/2016	N	< 1.0	< 1.0	< 1.0	< 1.0
	4/23/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/8/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
SSC-18	3/1/2012	N	< 1	< 1	< 1	3.8
	5/4/2012	N	< 1	< 1	< 1	3.7
	1/28/2013	N	12.9	12.9	< 1	34.3
	2/27/2013	N	< 1	< 1	< 1	2.1
	6/27/2013	N	9.9	9.9	< 1	22.9
	9/26/2013	N	2.9	3.4	< 1	12.2
	12/18/2013	N	5.3	5.3	< 1.0	16.8
	3/19/2014	N	1.7	1.7	< 1.0	6.6
	6/19/2014	N	8.5	9.2	< 1.0	25.7
	9/18/2014	N	32.0	32.2	1.6	74.4
	12/2/2014	N	30.1	30.1	1.4	81.7
	3/24/2015	N	9.1	9.5	< 1.0	31.0
	6/17/2015	N	26.7	28.8	1.7	84.2
	10/1/2015	N	40.2	40.6	1.7	86.1
	12/29/2015	N	6.7	6.7	< 1.0	21.6
	3/29/2016	N	15.4	15.7	< 1.0	42.8
	9/13/2016	N	32.0	32.0	0.64	52.7
	4/24/2018	N	4.9	4.9	< 1.0	11.0
	10/9/2018	FD	5.1	5.1	< 1.0	9.2
	10/9/2018	N	5.3	5.3	< 1.0	10.0
SSC-19	5/4/2012	N	< 1	< 1	< 1	< 1
	2/26/2013	N	< 1	< 1	< 1	< 1
	6/28/2013	N	< 1	< 1	< 1	< 1
	12/19/2013	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/19/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	6/18/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/18/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/24/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	12/29/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/28/2016	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/13/2016	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/6/2017	N	< 1.0	< 1.0	< 1.0	< 1.0
	4/23/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/8/2018	N	< 1.0	< 1.0	< 1.0	< 1.0

**TABLE 3****VOCs Summary - UFSB South Section Wells - FMSSE-1 through 24**

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	c-DCE	1,2-DCE (total)	1,1,1-TCA	TCE
MCL:			70	NE	200	5
WQS:			70	NE	200	5
SSC-25	3/1/2012	N	< 1	< 1	< 1	< 1
	5/4/2012	N	< 1	< 1	< 1	< 1
	8/30/2012	N	< 1	< 1	< 1	< 1
	11/15/2012	N	< 1	< 1	< 1	< 1
	2/26/2013	N	< 1	< 1	< 1	< 1
	6/28/2013	N	< 1	< 1	< 1	< 1
	9/25/2013	N	< 1	< 1	< 1	< 1
	12/19/2013	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/19/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	6/18/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/18/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	12/2/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/24/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	6/17/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/1/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	12/29/2015	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/28/2016	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/13/2016	N	< 1.0	< 1.0	< 1.0	< 1.0
	3/6/2017	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/2/2017	N	< 1.0	< 1.0	< 1.0	< 1.0
	4/23/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/8/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/16/2019	N	< 1.0	< 1.0	< 1.0	< 1.0
SSC-26	3/1/2012	N	< 1	< 1	< 1	5.7
	5/4/2012	N	1.0	1.0	< 1	8.4
	8/30/2012	N	1.6	1.6	< 1	23.2
	11/14/2012	N	1.4	1.4	< 1	4.6
	2/26/2013	N	< 1	< 1	< 1	3.8
	6/28/2013	N	< 1	< 1	< 1	3.0
	9/25/2013	N	< 1	< 1	< 1	9.6
	12/19/2013	N	< 1.0	< 1.0	< 1.0	2.6
	3/19/2014	N	< 1.0	< 1.0	< 1.0	3.3
	6/19/2014	N	< 1.0	< 1.0	< 1.0	2.4
	9/18/2014	N	< 1.0	< 1.0	< 1.0	3.2
	12/3/2014	N	< 1.0	< 1.0	< 1.0	11.1
	3/24/2015	N	< 1.0	< 1.0	< 1.0	6.3
	6/18/2015	N	< 1.0	< 1.0	< 1.0	4.1
	9/30/2015	N	< 1.0	< 1.0	< 1.0	10.5
	12/29/2015	N	< 1.0	< 1.0	< 1.0	1.4
	3/28/2016	N	< 1.0	< 1.0	< 1.0	1.9
	9/13/2016	N	< 1.0	< 1.0	< 1.0	1.6
	3/10/2017	N	< 1.0	< 1.0	< 1.0	1.6
	10/6/2017	N	< 1.0	< 1.0	< 1.0	23.2
	4/24/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/8/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/25/2019	N	< 1.0	< 1.0	< 1.0	1.0

**TABLE 3****VOCs Summary - UFSB South Section Wells - FMSSE-1 through 24**

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	c-DCE	1,2-DCE (total)	1,1,1-TCA	TCE
MCL:			70	NE	200	5
WQS:			70	NE	200	5
SSC-27	3/1/2012	N	< 1	< 1	< 1	3.0
	5/4/2012	N	1.4	1.4	< 1	5.4
	11/14/2012	N	1.1	1.1	< 1	11.0
	2/26/2013	N	< 1	< 1	< 1	2.0
	6/28/2013	N	< 1	< 1	< 1	1.5
	9/25/2013	N	1.1	1.5	< 1	5.6
	12/19/2013	N	< 1.0	< 1.0	< 1.0	1.5
	3/19/2014	N	< 1.0	< 1.0	< 1.0	1.4
	6/19/2014	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/18/2014	N	< 1.0	< 1.0	< 1.0	2.2
	12/3/2014	N	< 1.0	< 1.0	< 1.0	4.2
	3/26/2015	N	< 1.0	< 1.0	< 1.0	1.1
	6/17/2015	N	< 1.0	< 1.0	< 1.0	8.4
	9/30/2015	N	< 1.0	< 1.0	< 1.0	3.5
	12/29/2015	N	< 1.0	< 1.0	< 1.0	1.1
	3/28/2016	N	< 1.0	< 1.0	< 1.0	1.7
	9/13/2016	N	0.16 J	< 1.0	< 1.0	1.9
	3/7/2017	N	< 1.0	< 1.0	< 1.0	2.9
	10/3/2017	N	< 1.0	< 1.0	< 1.0	3.7
	4/24/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	10/8/2018	N	< 1.0	< 1.0	< 1.0	< 1.0
	9/17/2019	N	< 1.0	< 1.0	< 1.0	2.6
SSC-31	2/29/2012	N	< 1	< 1	< 1	4.7
	4/30/2012	N	< 1	< 1	< 1	7.1
	8/28/2012	N	< 1	< 1	< 1	17.4
	11/15/2012	N	< 1	< 1	< 1	7.9
	2/28/2013	N	< 1	< 1	< 1	1.7
	6/27/2013	N	< 1	< 1	< 1	3.4
	9/27/2013	N	< 1	< 1	< 1	14.5
	12/19/2013	N	< 1.0	< 1.0	< 1.0	4.0
	3/20/2014	N	< 1.0	< 1.0	< 1.0	3.8
	6/19/2014	N	< 1.0	< 1.0	< 1.0	3.2
	9/24/2014	N	< 1.0	< 1.0	< 1.0	13.4
	12/3/2014	N	< 1.0	< 1.0	< 1.0	14.1
	3/26/2015	N	< 1.0	< 1.0	< 1.0	2.1
	6/18/2015	N	< 1.0	< 1.0	< 1.0	8.6
	9/30/2015	N	< 1.0	< 1.0	< 1.0	14.2 J
	12/31/2015	N	< 1.0	< 1.0	< 1.0	5.8
	3/29/2016	N	< 1.0	< 1.0	< 1.0	2.5
	9/13/2016	N	< 1.0	< 1.0	< 1.0	2.9
	3/9/2017	N	< 1.0	< 1.0	< 1.0	1.5
	10/6/2017	N	< 1.0	< 1.0	< 1.0	17.8
	4/26/2018	N	< 1.0	< 1.0	< 1.0	1.1
	10/26/2018	N	< 1.0	< 1.0	< 1.0	1.8
	9/18/2019	N	< 1.0	< 1.0	< 1.0	5.6
	10/7/2020	N	< 1.0	< 1.0	< 1.0	1.2

TABLE 3

## VOCs Summary - UFSB South Section Wells - FMSSE-1 through 24

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	c-DCE	1,2-DCE (total)	1,1,1-TCA	TCE
MCL:			70	NE	200	5
WQS:			70	NE	200	5
SSC-88	8/29/2012	N	8.4	8.6	< 1	857
	11/13/2012	N	11.4	11.4	< 10	931
	2/27/2013	N	10.7	10.7	< 10	779
	6/27/2013	N	< 10	< 10	< 10	568
	9/26/2013	N	5.9	5.9	< 5	682
	12/18/2013	N	5.9	5.9	< 5.0	653
	3/18/2014	N	6.6	6.6	< 5.0	535
	6/19/2014	N	7.5	7.5	< 5.0	629
	9/18/2014	N	6.5	6.5	< 5.0	582
	12/5/2014	N	7.4	7.4	< 5.0	315
	3/26/2015	N	6.5	6.5	< 5.0	555
	6/17/2015	N	< 5.0	< 5.0	< 5.0	469
	10/1/2015	N	7.8	7.8	< 5.0	417
	12/31/2015	N	9.1	9.1	< 5.0	529
	3/28/2016	N	5.0	5.0	< 5.0	182
	9/13/2016	N	5.3	5.3	< 5.0	236
	3/8/2017	N	6.7	6.7	< 5.0	385
	10/4/2017	N	4.1 J	4.1 J	< 5.0	258
	4/26/2018	N	5.6	5.6	< 5.0	257
	10/10/2018	N	5.6	5.6	< 5.0	306
	9/18/2019	N	4.0 J	< 5.0	< 5.0	166
	10/8/2020	N	6.8	6.8	< 0.65 M	181

## NOTES:

UFSB - Unconsolidated Fractured Bedrock (undifferentiated)

UFSB-UNC Unconsolidated portion of UFSB

UFSB-FSB Fractured Shallow Bedrock portion of UFSB

All concentrations in micrograms per liter (µg/L)

< - concentration below reporting limit

(M indicates below detection limit)

Compounds with more than one detection in at least one well are shown

**Bold numbers indicate concentration above reporting limit**

**Shaded value indicates concentration above one or more screening levels:**

WQS - MDNR Water Quality Standard-Groundwater, Jan 2014

MCL - Maximum Contaminant Level

NE - no standard established

NA - not analyzed

N - normal field sample

FD - field duplicate sample

J - estimated value

M - below detection limit

DCE - Dichloroethene

t - *trans*-1,2 isomer

c - *cis*-1,2 isomer

TCA - Trichloroethane

TCE - Trichloroethene



ne	Chloro-ethane	Chloro-form	1,1-DCA	1,2-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	Toluene	1,1,1-TCA
	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	1,000	200
	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	1,000	200
0	<100	<100	<100	<100	<100	140	<100	140	NA	NA	<1000	<100	<100	<100
0	<25	<25	<25	<25	<25	92.1	<25	92.1	NA	NA	<250	38.7	<25	<25
0	<25	<25	<25	<25	<25	117	<25	117	NA	NA	<250	<25	<25	<25
0	<25	<25	<25	<25	25.5	231	<25	231	NA	NA	<250	48.5	<25	<25
0	<1	<1	26.2	<1	32.6	219	2.3	219	NA	NA	118	<1	5.6	<1
0	<50	<50	<50	<50	<50	284	<50	284	<7.5	NA	<500	<50	<50	<50
0	<25	<25	<25	<25	<25	114	<25	128	NA	22.2	<250	<25	<25	<25
0	<50.0	<50.0	<50.0	<50.0	<50.0	256	<50.0	256	21.5	NA	<500	<50.0	<50.0	<50.0
0	<50.0	<50.0	<50.0	<50.0	<50.0	239	<50.0	262	22.0	NA	<500	<50.0	<50.0	<50.0
0	<50.0	<50.0	<50.0	<50.0	<50.0	306	<50.0	325	NA	NA	<500	<50.0	<50.0	<50.0
0	<20.0	<20.0	<20.0	<20.0	<20.0	189	<20.0	189	NA	NA	<200	<20.0	<20.0	<20.0
0	<20.0	<20.0	<20.0	<20.0	<20.0	436	<20.0	436	NA	NA	<200	<20.0	<20.0	<20.0
0	<25.0	<25.0	<25.0	<25.0	<25.0	325	<25.0	343	23.2	NA	<250	<25.0	<25.0	<25.0
0	<25.0	<25.0	<25.0	<25.0	<25.0	415	37.8	452	NA	NA	<250	<25.0	<25.0	<25.0
0	<1.0	<1.0	22.4	<1.0	28.0	531	20.4	531	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<25.0	<25.0	<25.0	<25.0	<25.0	611	<25.0	611	NA	NA	<250	<25.0	<25.0	<25.0
0	<25.0	<25.0	<25.0	<25.0	<25.0	562	<25.0	569	NA	NA	<250	<25.0	<25.0	<25.0
0	<25.0	<25.0	<25.0	<25.0	<25.0	416	<25.0	437	25.5	NA	<250	<25.0	<25.0	<25.0
0 M	<3.8 M	<3.5 M	14.9 J	<3.0 M	18.8 J	460	<5.0 M	460	NA	NA	<14.8 M	<3.8 M	<4.2 M	<2.8 M
0 M	<3.8 M	<3.5 M	<1.2 M	<3.0 M	<5.0 M	461	<5.0 M	461	19.6	NA	<14.8 M	<3.8 M	<4.2 M	<2.8 M
0 M	<3.8 M	<3.5 M	6.6 J	<3.0 M	6.4 J	173	<5.0 M	173	NA	NA	<14.8 M	<3.8 M	29.6	<2.8 M
0 M	<1.0 M	<1.0 M	6.2	<1.0 M	6.8	178	1.6	179	NA	NA	<10.0 M	<1.0 M	32.3	2.0
0	<5.0	<5.0	6.1	<5.0	<5.0	103	<5.0	104	<3.0	NA	<50.0	<5.0	12.9	<5.0
0	<5.0	<5.0	9.1	<5.0	9.0	334	<5.0	337	NA	NA	<50.0	<5.0	<5.0	<5.0
0 M	<8.4 M	<2.0 M	9.3 J	3.3 J	10.2 J	511	<3.4 M	514	13.5	NA	<14.0 M	<5.4 M	<2.8 M	<2.4 M
0 M	<7.6 M	<3.4 M	10.1 J	<4.6 M	15.3 J	2,320	12.3 J	2,330	NA	NA	60.8 J	<16.2 M	3.8 J	<2.6 M
0	<1.0	<1.0	11.6	<1.0	16.3	2,220	15.5	2,240	NA	NA	<10.0	<1.0	2.5	<1.0





ne	Chloro-ethane	Chloro-form	1,1-DCA	1,2-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	Toluene	1,1,1-TCA
	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	1,000	200
	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	1,000	200
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<b>1.5</b>	<b>1.1</b>	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.7</b>	<1.0	<b>1.7</b>	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.1</b>	<1.0	<b>1.1</b>	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.3</b>	<1.0	<b>1.3</b>	NA	NA	<10.0	<1.0	<b>0.79</b> <sub>J</sub>	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.4</b>	<1.0	<b>1.4</b>	<3.0	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.6</b>	<1.0	<b>1.6</b>	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>2.2</b>	<1.0	<b>2.2</b>	<3.0	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.0</b>	<1.0	<b>1.0</b>	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.6</b>	<1.0	<b>1.6</b>	<3.0	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0
5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<b>1.1</b>	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.1</b>	<1.0	<b>1.1</b>	NA	NA	<10.0	<1.0	<b>0.65</b> <sub>J</sub>	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.1</b>	<1.0	<b>1.1</b>	<3.0	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.3</b>	<1.0	<b>1.3</b>	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<3.0	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	<b>1.7</b>	<1.0	<b>1.7</b>	NA	NA	<10.0	<1.0	<1.0	<1.0





Name	Chloro-ethane	Chloro-form	1,1-DCA	1,2-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane		MEK	Methylene Chloride	Toluene	1,1,1-TCA
									NE	NE				
	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	1,000	200
	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	1,000	200
0	<50	<50	<50	<50	122	5,970	<50	6,010	NA	NA	<500	136	<50	141
0	<50	<50	<50	<50	<50	2,700	<50	2,720	NA	NA	<500	<50	<50	<50
0	<50	<50	<50	<50	<50	3,710	<50	3,740	NA	NA	<500	<50	<50	<50
0	<50	<50	<50	<50	<50	3,550	<50	3,550	NA	NA	<500	<50	<50	<50
0	<50	<50	<50	<50	71.4	5,920	<50	5,950	NA	NA	<500	<50	<50	81.7
0	<50	<50	<50	<50	63.3	5,230	<50	5,260	<15	NA	<500	<50	<50	58.7
0	<50	<50	<50	<50	63.6	4,210	166	4,380	NA	7.8	<500	<50	<50	<50
0	<50.0	<50.0	<50.0	<50.0	<50.0	4,600	<50.0	4,630	5.9	NA	<500	<50.0	<50.0	56.4
0	<50.0	<50.0	<50.0	<50.0	<50.0	4,150	216	4,360	7.3	NA	<500	<50.0	<50.0	<50.0
0	<50.0	<50.0	<50.0	<50.0	51.6	5,030	222	5,260	NA	NA	<500	<50.0	<50.0	57.4
0	<50.0	<50.0	<50.0	<50.0	55.5	5,600	<50.0	5,640	NA	NA	<500	<50.0	<50.0	65.1
0	<1.0	<1.0	38.7	<1.0	57.8	4,710	<200	4,740	NA	NA	<10.0	<1.0	<1.0	72.0
0	<50.0	<50.0	<50.0	<50.0	55.1	4,760	289	5,040	NA	NA	<500	<50.0	<50.0	78.0
5	<1.0	<1.0	<1.0	<1.0	<1.0	62.6	2.7	65.2	<3.0 UJ	NA	<10.0	<1.0	<1.0	1.3
0	<1.0	<1.0	<1.0	<1.0	<1.0	81.8	<1.0	82.3	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	119	<1.0	119	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	102	<1.0	102	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	103	1.3	104	<2.0	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	0.93 J	<1.0	0.36 J	75.4	0.47 J	75.9	NA	NA	<10.0	<1.0	<1.0	0.54 J
0	<1.0	<1.0	1.5	<1.0	<1.0	186	<1.0	187	<3.0	NA	<10.0	<1.0	<1.0	1.2
0	<1.0	<1.0	1.0	<1.0	<1.0	86.1	<1.0	86.8	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	89.8	<1.0	90.4	<3.0	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	48.6	<1.0	48.9	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	55.4	<1.0	55.8	<3.0	NA	<10.0	<1.0	<1.0	1.2
0	<1.0	<1.0	2.2	<1.0	<1.0	57.4	2.3	59.7	NA	NA	<10.0	<1.0	<1.0	1.5
1	<1.0	<1.0	<1.0	<1.0	<1.0	43.2	1.6	44.8	<3.0 UJ	NA	<10.0	<1.0	2.1	1.3
0	<1.0	<1.0	<1.0	<1.0	<1.0	98.5	<1.0	99.1	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	91.6	<1.0	92.1	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	93.8	<1.0	94.4	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	82.0	1.4	83.3	<2.0	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	0.91 J	<1.0	0.34 J	70.6	0.37 J	70.9	NA	NA	<10.0	<1.0	<1.0	0.44 J
0	<1.0	<1.0	1.4	<1.0	<1.0	145	<1.0	146	<3.0	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	168	<1.0	169	NA	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	69.7	<1.0	70.2	<3.0	NA	<10.0	<1.0	<1.0	<1.0
0	<1.0	<1.0	<1.0	<1.0	<1.0	57.9	<1.0	58.2	NA	NA	<10.0	<1.0	<1.0	<1.0
5	<1.0	<1.0	1.0	<1.0	<1.0	61.1	<1.0	61.6	<3.0	NA	<10.0	<1.0	<1.0	1.1
0	<1.0	<1.0	2.0	<1.0	<1.0	62.7	1.7	64.3	NA	NA	<10.0	<1.0	<1.0	1.4

Sample Name	Chloro-ethane	Chloro-form	1,1-DCA	1,2-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	Toluene	1,1,1-TCA
Sample 1	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	1,000	200
Sample 2	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	1,000	200
Sample 3	<1.0	<1.0	<1.0	<1.0	<1.0	45.9	1.4	47.3	<3.0 UJ	NA	<10.0	<1.0	2.3	1.5
Sample 4	<1.0	<1.0	<1.0	<1.0	<1.0	88.6	<1.0	89.1	NA	NA	<10.0	<1.0	<1.0	<1.0
Sample 5	<1.0	<1.0	<1.0	<1.0	<1.0	90.1	<1.0	90.5	NA	NA	<10.0	<1.0	1.5	<1.0
Sample 6	<1.0	<1.0	<1.0	<1.0	<1.0	79.1	<1.0	79.6	NA	NA	<10.0	<1.0	<1.0	<1.0
Sample 7	<1.0	<1.0	<1.0	<1.0	<1.0	95.8	2.4	98.2	<2.0	NA	<10.0	<1.0	2.1	<1.0
Sample 8	<1.0	<1.0	0.94 J	<1.0	0.33 J	77.0	0.48 J	77.5	NA	NA	<10.0	<1.0	<1.0	0.61 J
Sample 9	<1.0	<1.0	<1.0	<1.0	<1.0	141	<1.0	142	<3.0	NA	<10.0	<1.0	1.3	<1.0
Sample 10	<1.0	<1.0	1.0	<1.0	<1.0	90.1	<1.0	90.6	NA	NA	<10.0	<1.0	<1.0	<1.0
Sample 11	<1.0	<1.0	1.3	<1.0	<1.0	92.8	<1.0	93.1	<3.0	NA	<10.0	<1.0	<1.0	<1.0
Sample 12	<1.0	<1.0	<1.0	<1.0	<1.0	59.4	<1.0	59.6	NA	NA	<10.0	<1.0	<1.0	<1.0
Sample 13	<1.0	<1.0	1.3	<1.0	<1.0	65.9	<1.0	66.2	<3.0	NA	<10.0	<1.0	<1.0	1.1
Sample 14	<1.0	<1.0	2.1	<1.0	<1.0	28.9	1.6	30.5	NA	NA	<10.0	<1.0	<1.0	1.2
Sample 15	<1.0	1.9	1.2	<1.0	<1.0	142	3.9	146	<3.0 UJ	NA	<10.0	<1.0	22.4	3.3
Sample 16	<1.0	<1.0	<1.0	<1.0	<1.0	99.4	<1.0	99.9	NA	NA	<10.0	<1.0	<1.0	<1.0
Sample 17	<1.0	<1.0	<1.0	<1.0	<1.0	116	<1.0	117	NA	NA	<10.0	<1.0	2.9	<1.0
Sample 18	<1.0	<1.0	<1.0	<1.0	<1.0	141	<1.0	142	NA	NA	<10.0	<1.0	5.6	<1.0
Sample 19	3.5	<1.0	<1.0	<1.0	<1.0	139	2.0	141	2.4	NA	<10.0	<1.0	5.3	<1.0
Sample 20	<1.0	<1.0	0.76 J	<1.0	0.47 J	149	0.53 J	149	NA	NA	<10.0	<1.0	2.8	0.23 J
Sample 21	3.5	<1.0	<1.0	<1.0	<1.0	202	<5.0	202	<3.0	NA	<10.0	<1.0	4.9	<1.0
Sample 22	<5.0	<5.0	<5.0	<5.0	<5.0	172	<5.0	172	NA	NA	<50.0	<5.0	2.4 J	<5.0
Sample 23	<5.0	<5.0	<5.0	<5.0	<5.0	231	<5.0	231	4.1	NA	<50.0	2.7 J	3.8 J	<5.0
Sample 24	<0.75 M	<0.70 M	1.2 J	2.1 J	<1.0 M	217	<1.0 M	217	NA	NA	<3.0 M	1.7 J	2.7 J	<0.55 M
Sample 25	<5.0	<5.0	1.9 J	0.77 J	1.2 J	250	1.7 J	252	4.5	NA	<50.0	<5.0	2.8 J	0.82 J
Sample 26	<1.0	<1.0	1.4	<1.0	<1.0	43.8	<1.0	44.7	NA	NA	<10.0	<1.0	1.1	<1.0
Sample 27	<5.0	<5.0	<5.0	<5.0	<5.0	72.9	<5.0	75.6	NA	NA	<50.0	<5.0	16.5	<5.0
Sample 28	<5.0	<5.0	<5.0	<5.0	<5.0	171	<5.0	173	NA	NA	<50.0	<5.0	<5.0	<5.0
Sample 29	<1.0	<1.0	1.1	<1.0	<1.0	149	<1.0	150	NA	NA	<10.0	<1.0	12.7	<1.0
Sample 30	<1.0	<1.0	<1.0	<1.0	<1.0	141	<1.0	142	NA	NA	<10.0	<1.0	8.4	<1.0
Sample 31	<1.0	<1.0	<1.0	<1.0	<1.0	162	1.4	164	<2.0	NA	<10.0	<1.0	9.6	<1.0
Sample 32	<5.0	<5.0	<5.0	<5.0	<5.0	155	<5.0	155	NA	NA	<50.0	<5.0	6.2	<5.0
Sample 33	<5.0	<5.0	<5.0	<5.0	<5.0	186	<5.0	186	<3.0	NA	<50.0	<5.0	5.7	<5.0
Sample 34	<1.0	<1.0	<1.0	<1.0	<1.0	172	<1.0	172	NA	NA	<10.0	<1.0	3.4	<1.0
Sample 35	1.8	<1.0	<1.0	<1.0	<1.0	234	<1.0	234	<3.0	NA	<10.0	<1.0	5.1	<1.0
Sample 36	3.3 J	<5.0	<5.0	<5.0	<5.0	227	<5.0	227	NA	NA	<50.0	1.6 J	4.3 J	<5.0
Sample 37	<1.0	<1.0	<1.0	<1.0	<1.0	63.2	<1.0	63.5	<3.0	NA	<10.0	<1.0	<1.0	1.2
Sample 38	<1.0	<1.0	<1.0	<1.0	<1.0	14.9	1.1	16.0	NA	NA	<10.0	<1.0	1.2	<1.0

ne	Chloro-ethane	Chloro-form	1,1-DCA	1,2-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	1,4-Dioxane	1,4-Dioxane (SIM)	MEK	Methylene Chloride	Toluene	1,1,1-TCA
	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	1,000	200
	NE	80	NE	5	7	70	100	NE	NE	NE	NE	5	1,000	200
0	< 1.0	2.1	2.3	< 1.0	< 1.0	304	4.5	310	NA	NA	< 10.0	< 1.0	11.9	1.4
1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	140	< 1.0	141	NA	NA	< 10.0	< 1.0	9.5	< 1.0
0	< 1.0	< 1.0	1.5	< 1.0	< 1.0	191	1.8	191	NA	NA	< 10.0	< 1.0	12.6	< 1.0
0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	175	< 5.0	175	NA	NA	< 50.0	< 5.0	7.5	< 5.0
0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	241	< 5.0	243	NA	NA	< 50.0	< 5.0	7.3	< 5.0
5	1.5	< 1.0	0.55 J	< 1.0	0.75 J	191	0.63 J	192	NA	NA	< 10.0	< 1.0	2.5	0.18 J
0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	237	< 5.0	239	< 3.0	NA	< 50.0	< 5.0	5.2	< 5.0
0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	172	< 5.0	172	NA	NA	< 50.0	< 5.0	7.3	< 5.0
0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	243	< 5.0	243	4.4	NA	< 50.0	2.0 J	8.6	< 5.0
4 M	< 0.75 M	< 0.70 M	< 0.25 M	< 0.60 M	< 1.0 M	205	< 1.0 M	205	NA	NA	< 3.0 M	< 0.75 M	4.4 J	< 0.55 M
7 J	4.4 J	0.64 J	0.64 J	< 5.0	< 5.0	41.2	1.2 J	42.4	5.2	NA	15.5 J	< 5.0	8.9	< 5.0
0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.5	1.0	6.5	NA	NA	< 10.0	< 1.0	2.8	< 1.0
7 J	< 1.9 M	< 0.85 M	< 0.49 M	< 1.2 M	< 1.0 M	7.2	0.90 J	8.1	NA	NA	< 12.0 M	< 4.0 M	< 0.90 M	< 0.65 M

Compounds with more than one detection in at least one well are shown

**Bold numbers indicate concentration above reporting limit**

**Shaded value indicates concentration above one or more screening levels:**

WQS - MDNR Water Quality Standard-Groundwater, Jan 2014

MCL - Maximum Contaminant Level

NE - no standard established

NA - not analyzed

DCA - Dichloroethane

DCE - Dichloroethene

*t* - *trans* -1,2 isomer

*c* - *cis* -1,2 isomer

N - normal field sample

FD - field duplicate sample

J - estimated value

M - below detection limit

MEK - Methyl-Ethyl-Ketone (2-Butanone)

TCA - Trichloroethane

TCE - Trichloroethene

**TABLE 5****VOCs Summary - DBR - FMSSE-1 through 24**

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	TCE
MCL:			80	NE	7	70	100	NE	5
WQS:			80	NE	7	70	100	NE	5
CW-3	2/29/2012	N	1.3	< 1	< 1	< 1	< 1	< 1	< 1
	5/2/2012	N	NA	NA	NA	NA	NA	NA	< 1
	8/29/2012	N	NA	NA	NA	NA	NA	NA	< 1
	11/14/2012	N	NA	NA	NA	NA	NA	NA	< 1
	2/28/2013	N	NA	NA	NA	NA	NA	NA	< 1
	6/27/2013	N	NA	NA	NA	NA	NA	NA	< 1
	9/26/2013	N	NA	NA	NA	NA	NA	NA	< 1
	12/19/2013	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/18/2014	N	NA	NA	NA	NA	NA	NA	< 1
	6/18/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/18/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	12/4/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/26/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	6/18/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/30/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	12/30/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/31/2016	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/13/2016	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/8/2017	N	NA	NA	NA	NA	NA	NA	< 1.0
	10/5/2017	N	2.9	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/26/2018	N	NA	NA	NA	NA	NA	NA	< 1.0
	10/10/2018	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/26/2019	N	NA	NA	NA	NA	NA	NA	< 1.0
CW-4	2/29/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/2/2012	N	NA	NA	NA	NA	NA	NA	< 1
	8/29/2012	N	NA	NA	NA	NA	NA	NA	< 1
	11/14/2012	N	NA	NA	NA	NA	NA	NA	< 1
	2/28/2013	N	NA	NA	NA	NA	NA	NA	< 1
	6/27/2013	N	NA	NA	NA	NA	NA	NA	< 1
	9/26/2013	N	NA	NA	NA	NA	NA	NA	< 1
	12/19/2013	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/18/2014	N	NA	NA	NA	NA	NA	NA	< 1
	6/18/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/18/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	12/4/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/26/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	6/18/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/30/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	12/30/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/31/2016	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/13/2016	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/8/2017	N	NA	NA	NA	NA	NA	NA	< 1.0
	10/5/2017	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/26/2018	N	NA	NA	NA	NA	NA	NA	< 1.0
	10/10/2018	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/17/2019	N	NA	NA	NA	NA	NA	NA	< 1.0

**TABLE 5****VOCs Summary - DBR - FMSSE-1 through 24**

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	TCE
MCL:			80	NE	7	70	100	NE	5
WQS:			80	NE	7	70	100	NE	5
CW-5	2/29/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/2/2012	N	NA	NA	NA	NA	NA	NA	< 1
	8/29/2012	N	NA	NA	NA	NA	NA	NA	< 1
	11/14/2012	N	NA	NA	NA	NA	NA	NA	< 1
	2/28/2013	N	NA	NA	NA	NA	NA	NA	< 1
	6/27/2013	N	NA	NA	NA	NA	NA	NA	< 1
	9/26/2013	N	NA	NA	NA	NA	NA	NA	< 1
	12/19/2013	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/18/2014	N	NA	NA	NA	NA	NA	NA	< 1
	6/18/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/18/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	12/4/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/26/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	6/18/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/30/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	12/30/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/31/2016	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/13/2016	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/8/2017	N	NA	NA	NA	NA	NA	NA	< 1.0
	10/5/2017	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/26/2018	N	NA	NA	NA	NA	NA	NA	< 1.0
	10/10/2018	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/17/2019	N	NA	NA	NA	NA	NA	NA	< 1.0
CW-6	2/29/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/2/2012	N	NA	NA	NA	NA	NA	NA	< 1
	8/29/2012	N	NA	NA	NA	NA	NA	NA	< 1
	11/14/2012	N	NA	NA	NA	NA	NA	NA	< 1
	2/28/2013	N	NA	NA	NA	NA	NA	NA	< 1
	6/27/2013	N	NA	NA	NA	NA	NA	NA	< 1
	9/26/2013	N	NA	NA	NA	NA	NA	NA	< 1
	12/19/2013	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/18/2014	N	NA	NA	NA	NA	NA	NA	< 1
	6/18/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/18/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	12/4/2014	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/26/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	6/18/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/30/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	12/30/2015	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/31/2016	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/13/2016	N	NA	NA	NA	NA	NA	NA	< 1.0
	3/8/2017	N	NA	NA	NA	NA	NA	NA	< 1.0
	10/5/2017	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/26/2018	N	NA	NA	NA	NA	NA	NA	< 1.0
	10/10/2018	N	NA	NA	NA	NA	NA	NA	< 1.0
	9/17/2019	N	NA	NA	NA	NA	NA	NA	< 1.0



**TABLE 5****VOCs Summary - DBR - FMSSE-1 through 24**

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	TCE
MCL:			80	NE	7	70	100	NE	5
WQS:			80	NE	7	70	100	NE	5
REM-1	2/27/2012	N	< 1	1.2	< 1	26.7	< 1	26.9	54.4
	4/30/2012	N	< 1	< 1	< 1	26.2	< 1	26.4	38.2
	8/28/2012	N	< 1	2.2	1.6	37.1	< 1	35.4	87.7
	11/12/2012	N	< 1	3.0	1.9	55.4	< 1	55.9	126
	2/25/2013	N	< 1	2.5	1.8	61.0	< 1	62.0	118
	6/24/2013	N	< 1	2.3	1.6	72.6	< 1	73.0	77.4
	9/23/2013	N	< 1	2.2	1.8	56.5	4.5	61.0	79.4
	12/16/2013	N	< 1.0	2.5	1.7	70.0	< 1.0	70.5	72.9
	3/17/2014	N	< 1.0	2.1	1.6	71.1	4.0	75.1	61.1
	6/16/2014	N	< 1.0	2.1	1.7	70.9	2.8	73.7	65.4
	9/15/2014	N	< 1.0	2.8	1.8	75.3	< 1.0	75.7	105
	12/1/2014	N	< 1.0	2.8	2.0	92.9	< 1.0	93.6	107
	3/23/2015	N	< 1.0	2.7	1.8	87.9	5.3	93.1	87.0
	6/15/2015	N	< 1.0	2.2	1.6	71.3	5.6	76.9	69.3
	9/28/2015	N	< 1.0	2.7	1.8	91.6	< 1.0	92.3	85.2
	12/28/2015	N	< 1.0	2.4	1.6	84.8	2.1	86.8	75.5
	3/29/2016	N	< 1.0	2.0	1.4	78.2	1.7	79.8	50.9
	9/12/2016	N	< 1.0	2.5	2.0	85.5	0.57	86.0	93.5
	3/6/2017	N	< 1.0	3.1	2.4	105	< 1.0	105	111
	10/2/2017	N	< 1.0	3.2	2.4	106	< 1.0	106	112
	4/23/2018	N	< 1.0	3.6	3.1	131	3.1	134	134
	10/8/2018	N	< 1.0	4.1	3.1	102	< 1.0	103	190
	9/16/2019	N	< 1.0	2.9	2.3	106	< 1.0	106	98.6
	10/6/2020	N	< 1.0	3.3	2.5	93.9	< 1.0	94.5	129

**TABLE 5****VOCs Summary - DBR - FMSSE-1 through 24**

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	TCE
MCL:			80	NE	7	70	100	NE	5
WQS:			80	NE	7	70	100	NE	5
SSC-2B	2/28/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/1/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/29/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	11/14/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	2/26/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	6/25/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/25/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	12/17/2013	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/18/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/18/2014	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/18/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/17/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/17/2014	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/3/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/23/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/17/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/30/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/30/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/30/2016	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/13/2016	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/8/2017	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/3/2017	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/24/2018	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/9/2018	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/17/2019	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

TABLE 5

## VOCs Summary - DBR - FMSSE-1 through 24

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	TCE
MCL:			80	NE	7	70	100	NE	5
WQS:			80	NE	7	70	100	NE	5
SSC-3B	2/29/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	2.2
	5/2/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	2.3
	8/29/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	2.6
	11/14/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	2.8
	2/27/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	3.4
	6/26/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	3.1
	9/25/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	4.2
	12/18/2013	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.9
	3/19/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.1
	6/18/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.8
	9/18/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.9
	12/4/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.8
	3/25/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.8
	6/17/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.4
	9/30/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.5
	12/30/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.7
	12/30/2015	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.8
	3/31/2016	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.9
	3/31/2016	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	3.2
	9/14/2016	N	< 1.0	< 1.0	< 1.0	0.76 J	< 1.0	0.76 J	5.5
	3/8/2017	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.0
	3/8/2017	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.0
	10/4/2017	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.6
	4/25/2018	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	6.2
	4/25/2018	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.6
	10/10/2018	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.9
	9/18/2019	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	5.5
	9/18/2019	FD	< 1.0	< 1.0	< 1.0	1.0	< 1.0	1.0	5.5
	10/6/2020	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.0
	10/6/2020	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	4.3

**TABLE 5****VOCs Summary - DBR - FMSSE-1 through 24**

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	TCE
MCL:			80	NE	7	70	100	NE	5
WQS:			80	NE	7	70	100	NE	5
SSC-4B	2/28/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/1/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/28/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	11/13/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	2/26/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	6/25/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/24/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	12/17/2013	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/18/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/17/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/16/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/2/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/24/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/24/2015	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/16/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/29/2015	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/29/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/29/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/29/2016	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/13/2016	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/13/2016	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/7/2017	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/3/2017	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	4/24/2018	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/9/2018	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/9/2018	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/17/2019	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

TABLE 5

## VOCs Summary - DBR - FMSSE-1 through 24

Solid State Circuits, Inc. Superfund Site

Republic, Missouri

Well ID	Sample Date	Sample Type	Chloro-form	1,1-DCA	1,1-DCE	c-DCE	t-DCE	1,2-DCE (total)	TCE
MCL:			80	NE	7	70	100	NE	5
WQS:			80	NE	7	70	100	NE	5
SSC-6B	2/28/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	5/1/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	8/28/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	11/13/2012	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	2/28/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	6/26/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	< 1
	9/24/2013	N	< 1	< 1	< 1	< 1	< 1	< 1	1.8
	12/17/2013	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/17/2013	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/19/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/17/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/17/2014	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/16/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/1/2014	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/1/2014	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/25/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/15/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	6/15/2015	FD	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/28/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	12/28/2015	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/28/2016	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/12/2016	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	3/6/2017	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/2/2017	N	< 1.0	< 1.0	< 1.0	1.2	< 1.0	1.2	< 1.0
	4/24/2018	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	10/8/2018	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
	9/16/2019	N	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

## NOTES:

All concentrations in micrograms per liter (µg/L)

&lt; - concentration below reporting limit

(M indicates below detection limit)

Compounds with more than one detection in at least one well are shown

**Bold numbers indicate concentration above reporting limit****Shaded value indicates concentration above one or more screening levels:**

WQS - MDNR Water Quality Standard-Groundwater, Jan 2014

MCL - Maximum Contaminant Level

NE - no standard established

NA - not analyzed

N - normal field sample

FD - field duplicate sample

J - estimated value

M - below detection limit

DCA - Dichloroethane

DCE - Dichloroethene

*t* - *trans* -1,2 isomer*c* - *cis* -1,2 isomer

TCE - Trichloroethene



Sample Type	VOCs						Field Water Quality Parameters						Geochemistry		
	1,1-DCA µg/L	1,1-DCE µg/L	c-DCE µg/L	t-DCE µg/L	1,1,1-TCA µg/L	TCE µg/L	Vinyl Chloride µg/L	Temperature °C	pH SU	ORP mV	DO mg/L	SpC µS/cm	Sulfate mg/L	Sulfide mg/L	TOC mg/L
MCL: WQS:	NE	7	70	100	200	5	2								
	NE	7	70	100	200	5	2								
N	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	22.4	6.8	118	2.0	576	NA	NA	NA
N	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	21.2	7.2	105	0.40	610	NA	NA	NA
N	21.8 J	36.6 J	2,780	50.6	71.6	4,280	121	19.1	6.9	115	1.1	1,151	NA	NA	NA
N	NA	NA	NA	NA	NA	NA	NA	19.4	6.9	34.6	0.77	1,149	250	<0.050	NA
N	NA	NA	NA	NA	NA	NA	NA	19.5	5.9	-164.7	0.09	2,234	NA	NA	NA
N	<1.0	<1.0	42.5	<1.0	<1.0	<1.0	<1.0	18.0	6.0	-50.4	1.4	3,007	NA	NA	NA
N	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	19.6	7.0	-82.0	2.6	1,638	NA	NA	NA
N	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	17.1	7.0	-26.2	0.13	1,105	NA	NA	NA
N	396 J	1,690	48,600	265 J	3,380	84,700	383 J	15.9	6.6	114	0.61	1,627	189	<0.050 M	3.1
N	NA	NA	NA	NA	NA	NA	NA	18.4	6.3	-179.8	0.15	1,727	NA	NA	NA
N	<98.0 M	<210 M	37,500	<150 M	<130 M	<250 M	1,560	17.6	6.5	-87.3	0.04	1,899	<1.0 M	0.07	379
N	<0.97 M	<2.2 M	438	4.4 J	<1.2 M	1.8 J	106	16.2	6.4	-119.1	0.63	784	25.0	<0.050 M	4.3
N	NA	NA	NA	NA	NA	NA	NA	18.0	6.6	-98.3	0.09	721	NA	NA	NA
N	<0.98 M	<2.1 M	825	4.6 J	<1.3 M	<2.5 M	153	18.5	7.0	-96.3	0.04	823	NA	NA	NA
N	33.3 J	44.5 J	3,750	19.6 J	33.7 J	528	121	18.5	5.7	-65.5	0.29	850	NA	NA	NA
N	NA	NA	NA	NA	NA	NA	NA	17.3	7.3	-122.7	0.80	1,037	45.6	<0.050	NA
N	NA	NA	NA	NA	NA	NA	NA	19.5	7.0	-143.3	0.14	1,369	NA	NA	NA
N	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	19.3	7.3	-155.7	0.84	1,318	NA	NA	NA
N	7.6	42.2	333	<50.0	40.6	720	0.68 J	21.0	5.8	-33.5	6.0	547	NA	NA	NA
N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	INS	<0.050	NA
N	<0.98 M	48.1	1,200	<1.5 M	34.0	1,530	<2.5 M	21.4	7.7	-56.9	6.1	832	NA	NA	NA
N	21.5	66.6	1,240	<100	232	9,240	0.57 J	20.6	5.9	-6.4	6.2	533	NA	NA	NA
N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	INS	<0.050	NA
N	<0.98 M	<2.1 M	247	<1.5 M	<1.3 M	267	<2.5 M	19.4	7.6	-40.8	5.7	831	NA	NA	NA
N	2.6 J	5.6 J	225	<1.7 M	6.8 J	316	<1.1 M	24.0	5.9	-29.9	5.8	657	NA	NA	NA
N	<0.49 M	9.3	691	<0.75 M	14.4	1,630	<1.2 M	20.1	7.5	-28.0	4.7	675	NA	NA	NA
N	4.4 J	10.5	1,960	2.8 J	19.7	790	2.7 J	21.2	5.6	23.3	7.0	598	NA	NA	NA
N	10.6	20.2	3,590	<15.0 M	45.8	1,770	<2.5 M	18.7	7.4	-25.1	4.8	859	NA	NA	NA
N	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	16.0	6.6	-46.0	0.70	585	78.2 J+	<0.050	1.5
N	NA	NA	NA	NA	NA	NA	NA	19.6	7.0	-17.3	0.27	507	NA	NA	NA
N	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	19.6	7.1	-8.2	0.11	585	67.4 J	<0.050	1.3
N	<19.4 M	<44.0 M	108,000	1,700	<24.0 M	77,200	4,210	15.6	7.0	-134.8	0.63	1,258	123	<0.050 M	5.8
N	NA	NA	NA	NA	NA	NA	NA	17.8	6.2	-169.4	0.09	3,238	NA	NA	NA
N	<19.6 M	<42.0 M	6,390	72.6 J	<26.0 M	<50.0 M	257	17.9	6.1	-56.5	0.04	4,611	<1.0 M	0.11	52.2
N	171	50.9	3,900	26.5 J	491	2,400	252	16.2	6.9	-87.2	0.62	1,237	114	<0.050 M	8.6
N	NA	NA	NA	NA	NA	NA	NA	18.2	6.6	-183.1	0.14	3,173	NA	NA	NA
N	264	<10.5 M	1,540	<7.5 M	<6.5 M	<12.5 M	242	18.1	6.8	-111.2	0.18	3,315	<1.0 M	<0.10 M	1,330
N	138	50.1 J	10,800	52.2 J	521	5,630	85.3 J	16.8	7.4	-119.7	1.4	1,418	73.4	<0.050 M	4.0
N	NA	NA	NA	NA	NA	NA	NA	20.3	6.8	-192.5	0.20	2,145	NA	NA	NA
N	548 J	<2.1 M	91.5	111	26.1	<2.5 M	127	21.4	7.0	-104.7	0.09	2,524	<1.0 M	<0.050 M	380
N	543	<110 M	21,900	112 J	228 J	4,530	645	15.7	7.1	-125.6	0.60	1,424	89.4	<0.050 M	9.9
N	NA	NA	NA	NA	NA	NA	NA	21.0	6.4	-187.2	0.08	3,977	NA	NA	NA
N	860 J	<10.5 M	2,610	14.3 J	<6.5 M	<12.5 M	699	21.1	6.7	-104.4	0.05	3,620	3.2	<0.10 M	1,340

(a) Field parameter sample collected with a bailer; field parameter results may be altered by exposure to surface atmosphere.

Bold numbers indicate concentration above reporting limit

DCA - Dichloroethane

TCA - Tri

**Table 7: Robert Spring 6th FYR Data Summary**

Sampling location	Hydrogeologic unit	Sample matrix	Sample date	Sample type	1,1-Dichloroethane µg/L	1,1-Dichloroethene µg/L	cis-1,2-Dichloroethene µg/L	trans-1,2-Dichloroethene µg/L	1,2-Dichloroethene (total) µg/L	Methylene Chloride µg/L	1,1,1-Trichloroethane µg/L	Trichloroethene µg/L	Vinyl Chloride µg/L
Robt Spg	UFSB-FSB	Groundwater	3/29/2016	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Robt Spg	UFSB-FSB	Groundwater	9/13/2016	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Robt Spg	UFSB-FSB	Groundwater	3/9/2017	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Robt Spg	UFSB-FSB	Groundwater	10/4/2017	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Robt Spg	UFSB-FSB	Groundwater	4/26/2018	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Robt Spg	UFSB-FSB	Groundwater	10/10/2018	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U
Robt Spg	UFSB-FSB	Groundwater	9/16/2019	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U

N – Normal Sample

U – Non-Detect

**Table 8: Temporary Monitoring Well Data Summary**

Sampling location	Screened or Open interval (ft. bls)	Hydrogeologic unit	Sample matrix	Sample date	Sample type	1,1-Dichloro-ethane	1,1-Dichloro-ethene	cis-1,2-Dichloro-ethene	trans-1,2-Dichloro-ethene	1,2-Dichloro-ethene (total)	Methylene Chloride	1,1,1-Trichloro-ethane	Trichloro-ethene	Vinyl Chloride
						µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
					RAO:	NE	7	70	100	NE	5	200	5	2
SSC-157	6.00 - 16.00	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	0.2 J	<1.0 U	<1.0 U	<1.0 U	<1.0 U	0.22 J	<1.0 U
SSC-157	6.00 - 16.00	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-158	8.00 - 14.50	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	0.44 J	<1.0 U
SSC-158	8.00 - 14.50	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-159	6.50 - 14.50	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	0.18 J	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-159	6.50 - 14.50	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-160	7.50 - 14.50	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-160	7.50 - 14.50	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-161	4.80 - 14.80	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-162	5.50 - 12.50	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	0.17 J	<1.0 U
SSC-162	5.50 - 12.50	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-163	5.00 - 13.50	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	0.59 J	<1.0 U
SSC-163	5.00 - 13.50	UFSB-UNC	Groundwater	10/18/2016	FD	<1.0 U	<1.0 U	0.21 J	<1.0 U	<1.0 U	<1.0 U	<1.0 U	0.94 J	<1.0 U
SSC-163	5.00 - 13.50	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-163	5.00 - 13.50	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	1.6	<1.0 U
SSC-164	4.50 - 14.50	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-164	4.50 - 14.50	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-165	5.00 - 15.00	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-165	5.00 - 15.00	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-166	14.50 - 19.50	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-166	14.50 - 19.50	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U
SSC-167	5.00 - 13.00	UFSB-UNC	Groundwater	10/18/2016	N	<1.0 U	<1.0 U	1	<1.0 U	1	<1.0 U	<1.0 U	0.76 J	<1.0 U
SSC-167	5.00 - 13.00	UFSB-UNC	Groundwater	11/8/2016	N	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U	<1.0 U

N – Normal Sample  
 FD – Field Duplicate  
 U – Non-Detect  
 J – Estimated Value

**Table 9: SSC-31 6<sup>th</sup> FYR Discharge Data Summary**

RA MONITORING NETWORK LOCATION	SAMPLE LOCATION	Mar 2016	Sep 2016	Mar 2017	Sep 2017	Mar 2018	Oct 2018	Oct 2019	Oct 2020
Sewer Discharge Location	Broad St. <sup>(1)</sup>	2.50	2.90	1.50	17.80	1.10	1.80	5.6	1.20

**Notes:**

All values given in micrograms/liter (µg/L).

(1) TCE value considered representative of SSC-31 because SSC-31 is the sole contributor at this location.

**Table 10: Sanitary Sewer Data Summary**

Sampling location	Sample matrix	Sample date	Sample type	1,1-Dichloro-ethane µg/m³	1,1-Dichloro-ethene µg/m³	cis-1,2-Dichloro-ethene µg/m³	trans-1,2-Dichloro-ethene µg/m³	1,2-Dichloro-ethene (total) µg/m³	Methylene Chloride µg/m³	1,1,1-Trichloro-ethane µg/m³	Trichloro-ethene µg/m³	Vinyl Chloride µg/m³
VISLS (AF=0.03; CR 1E-05 / HQ=0.1)				590	700		140			17,000	6.7	56
PR04SL	Sewer Cleanout	6/18/2020	N	< 1.7 U	< 1.7 U	9	< 1.7 U			< 2.3 U	9.5	< 0.55 U
SS141	Sewer Air	6/18/2020	N	< 1.8 U	< 1.7 U	52.4	< 1.7 U			< 2.4 U	62.7	< 0.56 U
SS141	Sewer Water	6/18/2020	N	< 10.0 U	< 10.0 U	289	< 10.0 U	290	< 10.0 U	< 10.0 U	283	< 10.0 U
SS141	Sewer Water	6/18/2020	FD	< 10.0 U	< 10.0 U	271	< 10.0 U	272	< 10.0 U	< 10.0 U	264	< 10.0 U
SS142A	Sewer Air	6/18/2020	N	75.1	96.5	6190	42.7			117	5950	104
SS142A	Sewer Water	6/18/2020	N	< 1.0 U	< 1.0 U	49.3	< 1.0 U	49.6	< 1.0 U	< 1.0 U	29.4	< 1.0 U
SS147	Sewer Air	6/18/2020	N	2.6	< 1.7 U	40.8	< 1.7 U			< 2.3 U	86.8	0.74
SS147	Sewer Water	6/18/2020	N	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	< 1.0 U	2.5	< 1.0 U	< 1.0 U	< 1.0 U
SS142A	Sewer Air	1/5/2021	N	< 1.6 U	< 7.1 U	24	< 3.1 U			< 1.6 U	18	< 8.3 U
SS147	Sewer Air	1/5/2021	N	< 1.6 U	< 7.2 U	< 1.3 U	< 3.1 U			< 1.7 U	2.8	< 8.3 U
SS147	Sewer Air	1/5/2021	FD	< 1.6 U	< 7.1 U	< 1.3 U	< 3.1 U			< 1.6 U	3.5	< 8.3 U
SS151	Sewer Air	1/5/2021	N	< 1.6 U	< 7.1 U	< 1.3 U	< 3.1 U			< 1.6 U	6.8	< 8.3 U
SS260	Sewer Air	1/5/2021	N	< 1.6 U	< 7.1 U	74	< 3.1 U			< 1.6 U	74	< 8.3 U
SS262	Sewer Air	1/5/2021	N	< 1.5 U	< 7.1 U	< 1.3 U	< 3.1 U			< 1.6 U	< 0.95 U	< 8.3 U
SS267	Sewer Air	1/5/2021	N	< 1.5 U	< 7.1 U	< 1.3 U	< 3.1 U			< 1.6 U	< 0.95 U	< 8.2 U
SS144	Sewer Air	3/18/2021	N	1.4 J	< 7.1 U	210	3 J			1.1 J	280	< 8.3 U
SS144	Sewer Air	3/18/2021	FD	1.5 J	< 7.1 U	230	3.6			1.2 J	300	2.9 J
SS184	Sewer Air	3/18/2021	N	< 1.6 U	< 7.1 U	21	0.45 J			< 1.7 U	46	< 8.3 U
SS258	Sewer Air	3/18/2021	N	0.44 J	< 7.1 U	55	< 3.1 U			< 1.6 U	110	< 8.3 U

N – Normal Sample

FD – Field Duplicate

U – Non-Detect

J – Estimated Value



**Table 11: Indoor Air Data Summary**

Sampling location	Sample matrix	Sample date	Sample type	1,1-Dichloro-ethane µg/m³	1,1-Dichloro-ethene µg/m³	cis-1,2-Dichloro-ethene µg/m³	trans-1,2-Dichloro-ethene µg/m³	1,1,1-Trichloro-ethane µg/m³	Trichloro-ethene µg/m³	Vinyl Chloride µg/m³
Indoor Air (CR 1E-04 / HQ 1)				180	210		42	5200	2	17
Sub-Slab (CR 1E-04/HQ 1)				5900	7000		1400	174,000	67	560
PR17B	Background	1/30/2018	N	0.31	< 0.058 U	< 0.058 U	< 0.058 U	0.42	0.52	0.28
PR17BAA01	Indoor Air	1/30/2018	N	0.35	0.51	0.36	0.26	0.45	0.52	0.31
PR17BAA02	Indoor Air	1/30/2018	N	0.4	0.55	0.38	< 0.059 U	0.52	0.62	< 0.038 U
PR04	Background	2/6/2018	N	< 0.066 U	< 0.065 U	< 0.065 U	< 0.065 U	< 0.089 U	< 0.088 U	< 0.042 U
PR04AA01	Indoor Air	2/6/2018	N	< 0.069 U	< 0.068 U	0.83	< 0.068 U	< 0.093 U	0.7	0.062
PR04AA02	Indoor Air	2/6/2018	N	< 0.11 U	< 0.11 U	0.43 J	< 0.11 U	< 0.15 U	0.29 J	< 0.072 U
PR04AA02	Indoor Air	2/6/2018	FD	< 0.11 U	< 0.11 U	0.78 J	< 0.11 U	< 0.15 U	0.64 J	< 0.072 U
PR04PB01	Subslab Vapor	2/6/2018	N	< 0.081 U	< 0.080 U	0.23	< 0.080 U	< 0.11 U	0.35	0.1
PR08	Background	2/13/2018	N	< 0.070 U	< 0.069 U	< 0.069 U	< 0.069 U	< 0.095 U	< 0.093 U	< 0.044 U
PR08AA01	Indoor Air	2/13/2018	N	< 0.064 U	< 0.062 U	< 0.062 U	< 0.062 U	< 0.086 U	< 0.085 U	< 0.040 U
PR08AA02	Indoor Air	2/13/2018	N	< 0.064 U	< 0.062 U	< 0.062 U	< 0.062 U	< 0.086 U	< 0.085 U	< 0.040 U
PR04	Background	8/29/2018	N	< 0.36 U	< 0.44 U	4.9	< 0.46 U	< 0.50 U	< 0.41 U	< 0.20 U
PR04AA01	Indoor Air	8/29/2018	N	< 0.37 U	< 0.45 U	6	< 0.47 U	< 0.51 U	9.8	< 0.21 U
PR04AA02	Indoor Air	8/29/2018	N	< 0.38 U	< 0.46 U	7.7	< 0.48 U	< 0.52 U	10.8	< 0.21 U
PR04AA02	Indoor Air	8/29/2018	FD	< 0.38 U	< 0.46 U	7.3	< 0.48 U	< 0.52 U	10.7	< 0.21 U
PR04PB01	Subslab Vapor	8/29/2018	N	< 0.46 U	< 0.56 U	< 0.45 U	< 0.59 U	< 0.64 U	< 0.53 U	< 0.26 U
PR04	Background	10/14/2018	N	< 0.064 U	< 0.062 U	< 0.062 U	< 0.062 U	< 0.086 U	0.27	< 0.040 U
PR04AA01	Indoor Air	10/14/2018	N	< 0.066 U	< 0.065 U	1.6	< 0.065 U	< 0.089 U	3.4	0.073
PR04AA02	Indoor Air	10/14/2018	N	< 0.067 U	< 0.066 U	< 0.066 U	< 0.066 U	< 0.091 U	2.8	< 0.043 U
PR04AA02	Indoor Air	10/14/2018	FD	< 0.067 U	< 0.066 U	< 0.066 U	< 0.066 U	< 0.091 U	3.3	< 0.043 U
PR04PB02	Subslab Vapor	10/14/2018	N	< 0.083 U	< 0.081 U	< 0.081 U	< 0.081 U	< 0.11 U	0.8	< 0.053 U
PR04WX01	Sump Water *	10/14/2018	N	< 0.050 U	< 0.20 U	< 0.080 U	< 0.20 U	< 0.11 U	< 0.17 U	< 0.13 U
PR04	Background	10/15/2018	N	< 0.064 U	< 0.062 U	< 0.062 U	< 0.062 U	< 0.086 U	< 0.085 U	< 0.040 U
PR04AA01	Indoor Air	10/15/2018	N	< 0.067 U	< 0.066 U	1.6	< 0.066 U	< 0.091 U	3.2	0.069
PR04AA02	Indoor Air	10/15/2018	N	< 0.069 U	< 0.068 U	2	< 0.068 U	< 0.093 U	3.6	0.082
PR04AA02	Indoor Air	10/15/2018	FD	< 0.069 U	< 0.068 U	1.8	< 0.068 U	< 0.093 U	4.1	< 0.044 U
PR04PB02	Subslab Vapor	10/15/2018	N	< 0.077 U	< 0.075 U	< 0.075 U	< 0.075 U	< 0.10 U	0.68	< 0.049 U
PR04AX01	Sump Vapor	10/15/2018	N	< 0.080 U	< 0.078 U	0.74	< 0.078 U	< 0.11 U	1.9	< 0.050 U
PR04AA01	Indoor Air	12/4/2018	N	< 0.069 U	< 0.068 U	0.26	< 0.068 U	< 0.093 U	0.27	< 0.044 U
PR04AA02	Indoor Air	12/4/2018	N	< 0.067 U	< 0.066 U	0.23	< 0.066 U	< 0.091 U	0.26	< 0.043 U
PR04	Background	1/8/2019	N	< 0.066 U	< 0.065 U	< 0.065 U	< 0.065 U	< 0.089 U	< 0.088 U	< 0.042 U
PR04AA01	Indoor Air	1/8/2019	N	< 0.069 U	0.076	1.1	< 0.068 U	< 0.093 U	2.6	< 0.044 U
PR04AA02	Indoor Air	1/8/2019	N	< 0.069 U	< 0.068 U	0.7	< 0.068 U	< 0.093 U	0.93	< 0.044 U
PR04	Background	3/26/2019	N	< 0.072 U	< 0.071 U	< 0.071 U	< 0.071 U	< 0.097 U	0.13	< 0.046 U
PR04AA01	Indoor Air	3/26/2019	N	< 0.069 U	< 0.068 U	1.4	< 0.068 U	< 0.093 U	2	0.088
PR04AA02	Indoor Air	3/26/2019	N	< 0.069 U	< 0.068 U	3.9	< 0.068 U	0.095	2.3	0.078
PR04AA01	Indoor Air	8/17/2019	N	< 1.6 U	< 7.1 U	< 1.3 U	< 3.1 U	< 1.6 U	1.1	
PR04AA02	Indoor Air	8/17/2019	N	< 1.6 U	< 7.1 U	1.4	< 3.1 U	< 1.6 U	2	
PR04AA01	Indoor Air	2/18/2020	N	< 1.6 U	< 7.1 U	< 1.3 U	< 3.1 U	< 1.6 U	< 0.95 U	
PR04AA02	Indoor Air	2/18/2020	N	< 1.6 U	< 7.1 U	1.5	< 3.1 U	< 1.6 U	1.5	
PR04AA01	Indoor Air	5/26/2020	N	< 1.6 U	< 7.1 U	2.8	< 3.1 U	< 1.6 U	4.4	
PR04AA02	Indoor Air	5/26/2020	N	< 1.6 U	< 7.1 U	6	< 3.1 U	< 1.6 U	12	
PR04SL	Sewer Cleanout	6/18/2020	N	< 1.7 U	< 1.7 U	9	< 1.7 U	< 2.3 U	9.5	< 0.55 U
PR04AA01	Indoor Air	1/5/2021	N	< 1.6 U	< 7.1 U	< 1.3 U	< 3.1 U	< 1.6 U	< 0.95 U	< 8.3 U
PR04AA02	Indoor Air	1/5/2021	N	< 1.6 U	< 7.1 U	< 1.3 U	< 3.1 U	< 1.6 U	< 0.95 U	< 8.3 U

N – Normal Sample  
 FD – Field Duplicate  
 U – Non-Detect  
 J – Estimated Value

**Table 12: Soil Gas Data Summary**

Sampling Location	Sample Matrix	Sample Date	Sample Type	1,1-Dichloro-ethane µg/m³	1,1-Dichloro-ethene µg/m³	cis-1,2-Dichloro-ethene µg/m³	trans-1,2-Dichloro-ethene µg/m³	1,1,1-Trichloro-ethane µg/m³	Trichloro-ethene µg/m³	Vinyl Chloride µg/m³
VISLs (AF=0.03; CR 1E-05 / HQ=0.1)				590	700		140	17,000	6.7	56
CN01AA01	Utility Vault	9/26/2017	N	< 0.45 U	< 0.50 U	2.6	< 0.62 U	2.1 J	26	< 0.26 U
CN01PB01	Soil Gas	9/28/2017	N	16.3	5	20.9	2.6	< 0.66 U	30.8	3.2
CN01PB02	Soil Gas	9/28/2017	N	< 0.43 U	0.53 J	169	9.9	14.1	326	55.9
CN01PB03	Soil Gas	9/28/2017	N	< 0.31 U	< 0.34 U	11.7	0.9 J	< 0.49 U	< 0.39 U	21.5
CN01PB04	Soil Gas	9/28/2017	N	45.2	1 J	28	2.2	300	9730	3.2
CN01PB05	Soil Gas	9/29/2017	N	1.5 J	< 0.48 U	4	0.87 J	71.9	729	< 0.25 U
CN01PB06	Soil Gas	9/28/2017	N	33.9	< 0.48 U	102	4.4	420	5630	< 0.25 U
CN01PB07	Soil Gas	9/28/2017	N	< 0.43 U	< 0.48 U	1.1 J	< 0.60 U	< 0.69 U	7.8	< 0.25 U
CN01PB07	Soil Gas	9/28/2017	FD	< 0.40 U	< 0.44 U	< 0.64 U	< 0.55 U	< 0.64 U	5.2	< 0.24 U
CN01PB08	Soil Gas	9/28/2017	N	< 0.43 U	< 0.48 U	1.9	< 0.60 U	< 0.69 U	160	< 0.25 U
CN01PB09	Soil Gas	9/28/2017	N	< 0.46 U	< 0.52 U	20.5	< 0.65 U	< 0.75 U	2	12.2
CN01PB11	Soil Gas	11/9/2017	N	< 0.43 U	< 0.48 U	< 0.69 U	< 0.60 U	< 0.69 U	< 0.54 U	< 0.25 U
CN01PB14	Soil Gas	11/9/2017	N	< 0.45 U	< 0.50 U	< 0.72 U	< 0.62 U	< 0.72 U	< 0.56 U	< 0.26 U
CN01PB15	Soil Gas	11/21/2017	N	< 0.43 U	< 0.48 U	< 0.69 U	< 0.60 U	< 0.69 U	< 0.54 U	< 0.25 U
CN01PB17	Soil Gas	11/21/2017	N	< 0.41 U	< 0.46 U	< 0.66 U	< 0.57 U	5.4	7.1	< 0.24 U
CN01PB21	Soil Gas	11/9/2017	N	< 0.43 UJ	< 0.48 UJ	< 0.69 UJ	< 0.60 UJ	< 0.69 UJ	< 0.54 UJ	< 0.25 UJ
CN01PB22	Soil Gas	11/9/2017	N	< 0.41 UJ	< 0.46 UJ	< 0.66 UJ	< 0.57 UJ	< 0.66 UJ	< 0.52 UJ	< 0.24 UJ
CN01PB23	Soil Gas	11/9/2017	N	< 0.40 UJ	< 0.44 UJ	< 0.64 UJ	< 0.55 UJ	1.4 J	< 0.50 UJ	< 0.24 UJ
CN01PB24	Soil Gas	11/9/2017	N	< 0.40 UJ	< 0.44 UJ	< 0.64 UJ	< 0.55 UJ	< 0.64 UJ	< 0.50 UJ	< 0.24 UJ
CN01PB25	Soil Gas	11/9/2017	N	< 0.43 U	< 0.48 U	< 0.69 U	< 0.60 U	< 0.69 U	< 0.54 U	< 0.25 U
CN01PB25	Soil Gas	11/9/2017	FD	< 0.43 U	< 0.48 U	< 0.69 U	< 0.60 U	< 0.69 U	< 0.54 U	< 0.25 U
CN01PB26	Soil Gas	11/9/2017	N	< 0.41 U	< 0.46 U	< 0.66 U	< 0.57 U	1.1 J	< 0.52 U	< 0.24 U
CN01PB27	Soil Gas	11/9/2017	N	< 0.41 U	< 0.46 U	< 0.66 U	< 0.57 U	< 0.66 U	< 0.52 U	< 0.24 U
CN01PB31	Soil Gas	11/21/2017	N	< 0.43 U	< 0.48 U	< 0.69 U	< 0.60 U	< 0.69 U	< 0.54 U	< 0.25 U
CN01TC01	Soil Gas	9/28/2017	N	24	44.6	42700	382	7.9	692	11200
CN01TC02	Soil Gas	10/5/2017	N	162	96.9	6930	12.4	893	20000	30.9
CN01TC04	Soil Gas	9/29/2017	N	17.7	< 0.46 U	471	15.2	122	6320	< 0.24 U
CN01TC06	Soil Gas	9/27/2017	N	1.2 J	< 0.34 U	0.91 J	< 0.42 U	1.5 J	0.55 J	< 0.18 U
CN01TC07	Soil Gas	9/29/2017	N	< 0.43 U	< 0.48 U	1.5 J	< 0.60 U	8.6	6.5 J	< 0.25 U
CN01TC07	Soil Gas	9/29/2017	FD	< 0.43 U	< 0.48 U	< 0.69 U	< 0.60 U	7.9	1.7 J	< 0.25 U
CN01TC09	Soil Gas	9/28/2017	N	< 0.40 U	< 0.44 U	1.4 J	< 0.55 U	6.2	215	< 0.24 U
CN01TC09	Soil Gas	9/28/2017	FD	< 0.40 U	< 0.44 U	1.5 J	< 0.55 U	4.6	218	< 0.24 U
CN01TC22	Soil Gas	11/3/2017	N	< 0.41 U	< 0.46 U	< 0.66 U	< 0.57 U	< 0.66 U	< 0.52 U	< 0.24 U
CN01TC23	Soil Gas	11/3/2017	N	< 0.40 U	< 0.44 U	< 0.64 U	< 0.55 U	< 0.64 U	< 0.50 U	< 0.24 U
CN01TC23	Soil Gas	11/3/2017	FD	< 0.40 U	< 0.44 U	< 0.64 U	< 0.55 U	< 0.64 U	< 0.50 U	< 0.24 U
CN01TC24	Soil Gas	11/3/2017	N	< 0.45 U	< 0.50 U	< 0.72 U	< 0.62 U	< 0.72 U	< 0.56 U	< 0.26 U
CN01TC25	Soil Gas	11/3/2017	N	< 0.75 U	18	165	5.7	< 1.2 U	12400	11.8
CN01TC31	Soil Gas	11/22/2017	N	< 0.41 U	19.9	66	< 0.57 U	< 0.66 U	8380	4.3
PN01TC01	Soil Gas	9/27/2017	N	1.6 J	< 0.50 U	1.6 J	0.95 J	938	2260	< 0.26 U
PN01TC03	Soil Gas	9/27/2017	N	< 0.43 U	< 0.48 U	< 0.69 U	< 0.60 U	< 0.69 U	38.2	< 0.25 U
PN01TC28	Soil Gas	11/2/2017	N	< 0.63 U	< 0.71 U	< 1.0 U	< 0.88 U	< 1.0 U	< 0.80 U	< 0.38 U

N – Normal Sample  
FD – Field Duplicate  
U – Non-Detect  
J – Estimated Value

### Table 13: 2016 Supplemental Soil Data Summary

Sampling Location	Screened or Open Interval (ft. bls)	Hydro-geologic unit	Sample matrix	Sample date	Sample type	1,1-Dichloro-ethane μg/kg	1,1-Dichloro-ethene μg/kg	cis-1,2-Dichloro-ethene μg/kg	trans-1,2-Dichloro-ethene μg/kg	1,2-Dichloro-ethene (total) μg/kg	Methylene Chloride μg/kg	1,1,1-Trichloro-ethane μg/kg	Trichloro-ethene μg/kg	Vinyl Chloride μg/kg
Resident RSL						3600	23,000	16,000	7,000		35,000	820,000	410	59
Worker RSL						16000	100,000	230,000	30,000		320,000	3,600,000	1900	1,900
Protection of Groundwater MCL/Risk Based						16	50	410	630		26	1,400	36	14
PR04SO-1	2.00 - 2.00	UFSB-UNC	Soil	4/30/2019	N	< 6.3	< 6.3	< 6.3	< 6.3	< 6.3	< 6.3	< 6.3	< 6.3	< 6.3
SSC-142	2.00 - 2.50	UFSB-UNC	Soil	10/10/2016	N	< 5.6 U	< 5.6 U	12.7	< 5.6 U	12.7	< 5.6 U	< 5.6 U	174	< 5.6 U
SSC-142	7.00 - 7.50	UFSB-UNC	Soil	10/10/2016	N	< 342 U	< 342 U	914	< 342 U	914	< 342 U	432	8120	< 342 U
SSC-142	13.00 - 13.50	UFSB-UNC	Soil	10/10/2016	N	< 6.9 U	< 6.9 U	76	< 6.9 U	78.2	< 6.9 U	< 6.9 U	9520	< 6.9 U
SSC-143	2.50 - 3.00	UFSB-UNC	Soil	10/10/2016	N	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	11	< 5.7 U
SSC-143	9.50 - 10.00	UFSB-UNC	Soil	10/10/2016	N	< 718 U	< 718 U	2630	< 718 U	2630	< 718 U	2020	9250	< 718 U
SSC-143	12.50 - 13.00	UFSB-UNC	Soil	10/10/2016	N	762	< 647 U	25700	< 647 U	25900	< 647 U	3540	24700 J	< 647 U
SSC-143	20.50 - 20.00	UFSB-UNC	Soil	10/10/2016	N	< 6.7 U	< 6.7 U	31.4	< 6.7 U	31.4	< 6.7 U	< 6.7 U	60	< 6.7 U
SSC-143	-	UFSB-UNC	Soil	10/10/2016	FD	< 625 U	< 625 U	16100	< 625 U	16100	< 625 U	1680	11600 J	< 625 U
SSC-144	2.00 - 2.50	UFSB-UNC	Soil	10/10/2016	N	< 5.7 U	< 5.7 U	11.3	< 5.7 U	11.3	< 5.7 U	< 5.7 U	39.7	< 5.7 U
SSC-144	8.50 - 9.00	UFSB-UNC	Soil	10/10/2016	N	< 1290 U	< 1290 U	50000	< 1290 U	50400	< 1290 U	< 1290 U	6570	< 1290 U
SSC-144	13.00 - 14.00	UFSB-UNC	Soil	10/10/2016	N	< 3770 U	< 3770 U	10600	< 3770 U	10600	< 3770 U	< 3770 U	130000	< 3770 U
SSC-144	22.50 - 23.00	UFSB-UNC	Soil	10/10/2016	N	< 747 U	< 747 U	25300 J	< 747 U	25400 J	< 747 U	< 747 U	21100 J	< 747 U
SSC-144	-	UFSB-UNC	Soil	10/10/2016	FD	< 348 U	< 348 U	3780 J	< 348 U	3780 J	< 348 U	< 348 U	2270 J	< 348 U
SSC-145	2.00 - 2.50	UFSB-UNC	Soil	10/11/2016	N	< 5.6 U	< 5.6 U	23.9	< 5.6 U	23.9	< 5.6 U	< 5.6 U	62.8	< 5.6 U
SSC-145	7.00 - 7.50	UFSB-UNC	Soil	10/11/2016	N	< 345 U	< 345 U	9030	< 345 U	9100	< 345 U	< 345 U	586	< 345 U
SSC-145	14.00 - 14.50	UFSB-UNC	Soil	10/11/2016	N	< 7.7 U	< 7.7 U	33.7	< 7.7 U	33.7	< 7.7 U	< 7.7 U	19.8	< 7.7 U
SSC-145	16.50 - 17.00	UFSB-UNC	Soil	10/11/2016	N	23.6	< 6.6 U	333	< 6.6 U	339	< 6.6 U	< 6.6 U	33.8	< 6.6 U
SSC-145	20.50 - 21.00	UFSB-UNC	Soil	10/11/2016	N	< 9.1 U	< 9.1 U	< 9.1 U	< 9.1 U	< 9.1 U	< 9.1 U	< 9.1 U	< 9.1 U	< 9.1 U
SSC-146	2.50 - 3.00	UFSB-UNC	Soil	10/11/2016	N	< 5.9 U	< 5.9 U	6	< 5.9 U	6	< 5.9 U	< 5.9 U	31.9	< 5.9 U
SSC-146	7.50 - 8.00	UFSB-UNC	Soil	10/11/2016	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	24.1	< 6.2 U
SSC-146	20.00 - 21.50	UFSB-UNC	Soil	10/11/2016	N	< 10.3 U	< 10.3 U	< 10.3 U	< 10.3 U	< 10.3 U	< 10.3 U	< 10.3 U	< 10.3 U	< 10.3 U
SSC-146	12.00 - 12.50	UFSB-UNC	Soil	10/11/2016	N	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U
SSC-147	2.50 - 3.00	UFSB-UNC	Soil	10/10/2016	N	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	14.1	< 5.8 U
SSC-147	7.50 - 8.00	UFSB-UNC	Soil	10/10/2016	N	< 6.9 U	< 6.9 U	38.8 J	< 6.9 U	38.8 J	< 6.9 U	< 6.9 U	41.4 J	< 6.9 U
SSC-147	14.50 - 15.00	UFSB-UNC	Soil	10/10/2016	N	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	13.1	< 7.7 U
SSC-147	13.50 - 14.00	UFSB-UNC	Soil	10/10/2016	N	< 6.6 U	< 6.6 U	77.6	< 6.6 U	79.2	< 6.6 U	< 6.6 U	122	< 6.6 U
SSC-147	-	UFSB-UNC	Soil	10/10/2016	FD	< 335 U	< 335 U	1410 J	< 335 U	1410 J	< 335 U	< 335 U	4010 J	< 335 U
SSC-148	2.50 - 3.00	UFSB-UNC	Soil	10/10/2016	N	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U
SSC-148	7.00 - 7.50	UFSB-UNC	Soil	10/10/2016	N	< 372 U	< 372 U	10000	< 372 U	10000	< 372 U	1630	8150	< 372 U
SSC-148	13.00 - 13.50	UFSB-UNC	Soil	10/10/2016	N	< 383 U	< 383 U	2690	< 383 U	2690	< 383 U	396	3180	< 383 U
SSC-148	18.50 - 19.00	UFSB-UNC	Soil	10/10/2016	N	< 4230 U	< 4230 U	10200	< 4230 U	10200	< 4230 U	< 4230 U	104000	< 4230 U
SSC-148	19.50 - 20.00	UFSB-UNC	Soil	10/10/2016	N	< 5.5 U	< 5.5 U	< 5.5 U	< 5.5 U	< 5.5 U	< 5.5 U	< 5.5 U	< 5.5 U	< 5.5 U
SSC-149	2.50 - 3.00	UFSB-UNC	Soil	10/10/2016	N	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	52.7	< 5.6 U
SSC-149	8.00 - 8.50	UFSB-UNC	Soil	10/10/2016	N	< 305 U	< 305 U	2510	< 305 U	2510	< 305 U	321	11800	< 305 U
SSC-149	10.00 - 11.00	UFSB-UNC	Soil	10/10/2016	N	< 3210 U	10500	10900	< 3210 U	10900	3900	455000	4340000	< 3210 U
SSC-149	11.00 - 11.50	UFSB-UNC	Soil	10/10/2016	N	< 3770 U	< 3770 U	3910	< 3770 U	3910	10000	7870	204000	< 3770 U
SSC-149	21.00 - 21.50	UFSB-UNC	Soil	10/10/2016	N	< 450 U	< 450 U	5030	< 450 U	5030	< 450 U	< 450 U	11900	< 450 U
SSC-150	2.50 - 3.00	UFSB-UNC	Soil	10/10/2016	N	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	83.1	< 5.8 U
SSC-150	8.50 - 9.00	UFSB-UNC	Soil	10/10/2016	N	< 3470 U	< 3470 U	9030	< 3470 U	9030	< 3470 U	13900	128000	< 3470 U
SSC-150	26.00 - 26.50	UFSB-UNC	Soil	10/10/2016	N	< 3330 U	< 3330 U	130000	5250	135000	8970	< 3330 U	7250000	< 3330 U
SSC-150	-	UFSB-UNC	Soil	10/10/2016	FD	< 6.7 U	< 6.7 U	113 J	< 6.7 U	116 J	< 6.7 U	< 6.7 U	93.9 J	< 6.7 U
SSC-150	14.00 - 14.50	UFSB-UNC	Soil	10/10/2016	N	< 1350 U	< 1350 U	3810 J	< 1350 U	3810 J	< 1350 U	< 1350 U	3130 J	< 1350 U
SSC-151	4.50 - 5.00	UFSB-UNC	Soil	10/10/2016	N	< 6.9 U	< 6.9 U	56.6	< 6.9 U	58.8	< 6.9 U	< 6.9 U	108	< 6.9 U
SSC-151	2.50 - 3.00	UFSB-UNC	Soil	10/10/2016	N	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	11.4	< 5.7 U
SSC-151	14.50 - 15.00	UFSB-UNC	Soil	10/10/2016	N	< 7.6 U	< 7.6 U	16.6	< 7.6 U	16.6	< 7.6 U	< 7.6 U	11.1	< 7.6 U
SSC-151	17.50 - 18.00	UFSB-UNC	Soil	10/10/2016	N	< 8.2 U	< 8.2 U	32.6	< 8.2 U	32.6	< 8.2 U	< 8.2 U	18.9	< 8.2 U
SSC-152	2.00 - 3.00	UFSB-UNC	Soil	10/10/2016	N	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	19	< 5.8 U
SSC-152	7.00 - 8.00	UFSB-UNC	Soil	10/10/2016	N	15.4	< 7.7 U	520	< 7.7 U	520	< 7.7 U	< 7.7 U	28	< 7.7 U
SSC-152	16.00 - 16.50	UFSB-UNC	Soil	10/10/2016	N	< 5.8 U	< 5.8 U	10.6	< 5.8 U	10.6	< 5.8 U	< 5.8 U	15.8	< 5.8 U
SSC-152	20.00 - 20.30	UFSB-UNC	Soil	10/10/2016	N	< 438 U	< 438 U	1850	< 438 U	1850	< 438 U	< 438 U	2150	< 438 U
SSC-153	2.00 - 2.50	UFSB-UNC	Soil	10/10/2016	N	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	10.4	< 5.6 U
SSC-153	8.50 - 9.00	UFSB-UNC	Soil	10/10/2016	N	< 6.5 U	< 6.5 U	137	< 6.5 U	137	< 6.5 U	< 6.5 U	150	< 6.5 U
SSC-153	14.50 - 15.00	UFSB-UNC	Soil	10/10/2016	N	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U
SSC-153	19.00 - 20.00	UFSB-UNC	Soil	10/10/2016	N	< 452 U	< 452 U	1060	< 452 U	1060	< 452 U	< 452 U	2920	< 452 U
SSC-153	-	UFSB-UNC	Soil	10/10/2016	FD	< 460 U	< 460 U	953	< 460 U	953	< 460 U	< 460 U	2720	< 460 U
SSC-154	2.50 - 3.00	UFSB-UNC	Soil	10/11/2016	N	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	< 5.7 U	33.2	< 5.7 U
SSC-154	6.00 - 6.50	UFSB-UNC	Soil	10/11/2016	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U

**Table 14: 2017 Supplemental Soil Sampling Data Summary**

Sampling Location	Screened or Open Interval (ft. bls)	Hydro-geologic unit	Sample matrix	Sample date	Sample type	1,1-Dichloro-ethane µg/kg	1,1-Dichloro-ethene µg/kg	cis-1,2-Dichloro-ethene µg/kg	trans-1,2-Dichloro-ethene µg/kg	1,2-Dichloroethene (total) µg/kg	Methylene Chloride µg/kg	1,1,1-Trichloro-ethane µg/kg	Trichloro-ethene µg/kg	Vinyl Chloride µg/kg
Resident RSL						3600	23,000	16,000	7,000		35,000	820,000	410	59
Worker RSL						16000	100,000	230,000	30,000		320,000	3,600,000	1900	1,900
Protection of Groundwater MCL/Risk Based						16	50	410	630		26	1,400	36	14
SSC-169	-	UFSB-UNC	Soil	11/13/2017	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U
SSC-169	6.00 - 7.00	UFSB-UNC	Soil	11/13/2017	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U
SSC-169	19.50 - 20.50	UFSB-UNC	Soil	11/13/2017	N	< 7.2 U	< 7.2 U	< 7.2 U	< 7.2 U	< 7.2 U	< 7.2 U	< 7.2 U	< 7.2 U	< 7.2 U
SSC-170	2.00 - 3.00	UFSB-UNC	Soil	11/13/2017	FD	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U
SSC-170	2.00 - 3.00	UFSB-UNC	Soil	11/13/2017	N	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U
SSC-170	6.00 - 7.00	UFSB-UNC	Soil	11/13/2017	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U
SSC-170	17.00 - 18.00	UFSB-UNC	Soil	11/13/2017	N	< 7.8 U	< 7.8 U	< 7.8 U	< 7.8 U	< 7.8 U	< 7.8 U	< 7.8 U	< 7.8 U	< 7.8 U
SSC-171	2.00 - 3.00	UFSB-UNC	Soil	11/13/2017	N	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U
SSC-171	6.00 - 7.00	UFSB-UNC	Soil	11/13/2017	N	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U
SSC-171	19.50 - 20.50	UFSB-UNC	Soil	11/13/2017	N	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U
SSC-172	2.00 - 3.00	UFSB-UNC	Soil	11/13/2017	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U
SSC-172	19.50 - 20.50	UFSB-UNC	Soil	11/13/2017	N	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U
SSC-172	6.00 - 7.00	UFSB-UNC	Soil	11/13/2017	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U
SSC-173	2.00 - 3.00	UFSB-UNC	Soil	11/13/2017	N	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U
SSC-173	6.00 - 7.00	UFSB-UNC	Soil	11/13/2017	N	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U
SSC-173	17.00 - 18.00	UFSB-UNC	Soil	11/13/2017	N	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U	< 6.4 U
SSC-174	6.00 - 7.00	UFSB-UNC	Soil	11/13/2017	FD	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U
SSC-174	2.00 - 3.00	UFSB-UNC	Soil	11/13/2017	N	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U
SSC-174	20.00 - 21.00	UFSB-UNC	Soil	11/13/2017	N	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U
SSC-174	6.00 - 7.00	UFSB-UNC	Soil	11/13/2017	N	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U
SSC-175	2.00 - 3.00	UFSB-UNC	Soil	11/13/2017	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U
SSC-175	6.00 - 7.00	UFSB-UNC	Soil	11/13/2017	N	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U
SSC-175	20.00 - 21.00	UFSB-UNC	Soil	11/13/2017	N	< 8.8 U	< 8.8 U	< 8.8 U	< 8.8 U	< 8.8 U	< 8.8 U	< 8.8 U	< 8.8 U	< 8.8 U
SSC-176	2.00 - 3.00	UFSB-UNC	Soil	11/14/2017	FD	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U
SSC-176	2.00 - 3.00	UFSB-UNC	Soil	11/14/2017	N	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U
SSC-176	6.00 - 7.00	UFSB-UNC	Soil	11/14/2017	N	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U
SSC-176	17.00 - 18.00	UFSB-UNC	Soil	11/14/2017	N	< 7.0 U	< 7.0 U	< 7.0 U	< 7.0 U	< 7.0 U	< 7.0 U	< 7.0 U	< 7.0 U	< 7.0 U
SSC-177	16.00 - 17.00	UFSB-UNC	Soil	11/14/2017	N	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U	< 6.8 U
SSC-177	2.00 - 3.00	UFSB-UNC	Soil	11/14/2017	N	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U
SSC-177	6.00 - 7.00	UFSB-UNC	Soil	11/14/2017	N	< 8.2 U	< 8.2 U	< 8.2 U	< 8.2 U	< 8.2 U	< 8.2 U	< 8.2 U	< 8.2 U	< 8.2 U
SSC-178	14.00 - 15.00	UFSB-UNC	Soil	11/14/2017	FD	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U
SSC-178	2.00 - 3.00	UFSB-UNC	Soil	11/14/2017	N	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U
SSC-178	14.00 - 15.00	UFSB-UNC	Soil	11/14/2017	N	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U
SSC-178	6.00 - 7.00	UFSB-UNC	Soil	11/14/2017	N	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U	< 5.8 U

N – Normal Sample  
 FD – Field Duplicate  
 U – Non-Detect  
 J – Estimated Value

**Table 15: 2018 Area 4 Soil Boring Data Summary**

Sampling Location	Screened or Open Interval (ft. bls)	Hydro-geologic unit	Sample matrix	Sample date	Sample type	1,1-Dichloro-ethane µg/kg	1,1-Dichloro-ethene µg/kg	cis-1,2-Dichloro-ethene µg/kg	trans-1,2-Dichloro-ethene µg/kg	1,2-Dichloroethene (total) µg/kg	Methylene Chloride µg/kg	1,1,1-Trichloro-ethane µg/kg	Trichloro-ethene µg/kg	Vinyl Chloride µg/kg
Resident RSL						3600	23,000	16,000	7,000		35,000	820,000	410	59
Worker RSL						16000	100,000	230,000	30,000		320,000	3,600,000	1900	1,900
Protection of Groundwater MCL/Risk Based						16	50	410	630		26	1,400	36	14
SSC-180	2.00 - 3.00	UFSB-UNC	Soil	2/7/2018	N	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U
SSC-180	6.00 - 7.00	UFSB-UNC	Soil	2/7/2018	N	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U
SSC-180	17.00 - 18.00	UFSB-UNC	Soil	2/7/2018	N	< 8.4 U	< 8.4 U	13.8	< 8.4 U	13.8	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U
SSC-181	2.00 - 3.00	UFSB-UNC	Soil	2/7/2018	FD	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U	< 6.5 U
SSC-181	2.00 - 3.00	UFSB-UNC	Soil	2/7/2018	N	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U	< 6.7 U
SSC-181	6.00 - 7.00	UFSB-UNC	Soil	2/7/2018	N	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U
SSC-181	14.00 - 15.00	UFSB-UNC	Soil	2/7/2018	N	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U
SSC-182	2.00 - 3.00	UFSB-UNC	Soil	2/7/2018	N	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	10.7 J	< 6.1 U	< 6.1 U	< 6.1 U
SSC-182	6.00 - 7.00	UFSB-UNC	Soil	2/7/2018	N	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U
SSC-182	14.00 - 15.00	UFSB-UNC	Soil	2/7/2018	N	< 5.4 U	< 5.4 U	< 5.4 U	< 5.4 U	< 5.4 U	< 5.4 U	< 5.4 U	< 5.4 U	< 5.4 U
SSC-183	2.00 - 3.00	UFSB-UNC	Soil	2/7/2018	N	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U
SSC-183	6.00 - 7.00	UFSB-UNC	Soil	2/7/2018	N	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U
SSC-183	13.00 - 14.00	UFSB-UNC	Soil	2/7/2018	N	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U
SSC-184	2.00 - 3.00	UFSB-UNC	Soil	2/7/2018	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	9.8 J	< 6.2 U	< 6.2 U	< 6.2 U
SSC-184	7.00 - 8.00	UFSB-UNC	Soil	2/7/2018	N	< 7.9 U	< 7.9 U	< 7.9 U	< 7.9 U	< 7.9 U	< 7.9 U	< 7.9 U	< 7.9 U	< 7.9 U
SSC-184	17.00 - 18.00	UFSB-UNC	Soil	2/7/2018	N	< 10.2 U	< 10.2 U	106	< 10.2 U	106	< 10.2 U	< 10.2 U	351	< 10.2 U
SSC-185	13.00 - 14.00	UFSB-UNC	Soil	2/7/2018	FD	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U	< 8.1 U
SSC-185	2.00 - 3.00	UFSB-UNC	Soil	2/7/2018	N	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	9.5	< 6.3 U
SSC-185	7.00 - 8.00	UFSB-UNC	Soil	2/7/2018	N	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U
SSC-185	13.00 - 14.00	UFSB-UNC	Soil	2/7/2018	N	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U
SSC-186	2.00 - 3.00	UFSB-UNC	Soil	2/7/2018	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	23.1	< 6.2 U
SSC-186	6.00 - 7.00	UFSB-UNC	Soil	2/7/2018	N	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U	< 7.6 U
SSC-186	11.00 - 12.00	UFSB-UNC	Soil	2/7/2018	N	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U
SSC-187	2.00 - 3.00	UFSB-UNC	Soil	2/7/2018	N	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	< 5.9 U	12.2	< 5.9 U
SSC-187	6.00 - 7.00	UFSB-UNC	Soil	2/7/2018	N	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U
SSC-187	17.00 - 18.00	UFSB-UNC	Soil	2/7/2018	N	< 8.7 U	< 8.7 U	< 8.7 U	< 8.7 U	< 8.7 U	< 8.7 U	< 8.7 U	< 8.7 U	< 8.7 U
SSC-188	2.00 - 3.00	UFSB-UNC	Soil	2/7/2018	N	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U
SSC-188	6.00 - 7.00	UFSB-UNC	Soil	2/7/2018	N	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U	< 7.7 U
SSC-188	12.00 - 13.00	UFSB-UNC	Soil	2/7/2018	N	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U	< 6.6 U
SSC-189	6.00 - 7.00	UFSB-UNC	Soil	2/8/2018	FD	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U	< 7.4 U
SSC-189	2.00 - 3.00	UFSB-UNC	Soil	2/8/2018	N	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U	< 6.0 U
SSC-189	6.00 - 7.00	UFSB-UNC	Soil	2/8/2018	N	< 7.5 U	< 7.5 U	< 7.5 U	< 7.5 U	< 7.5 U	< 7.5 U	< 7.5 U	< 7.5 U	< 7.5 U
SSC-189	16.00 - 17.00	UFSB-UNC	Soil	2/8/2018	N	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U	< 8.0 U
SSC-190	2.00 - 3.00	UFSB-UNC	Soil	2/8/2018	N	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U	< 6.1 U
SSC-190	5.00 - 6.00	UFSB-UNC	Soil	2/8/2018	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U
SSC-190	17.50 - 18.50	UFSB-UNC	Soil	2/8/2018	N	< 8.6 U	< 8.6 U	43.6	< 8.6 U	43.6	< 8.6 U	< 8.6 U	< 8.6 U	< 8.6 U
SSC-191	2.00 - 3.00	UFSB-UNC	Soil	2/8/2018	N	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	< 5.6 U	13.3	< 5.6 U
SSC-191	5.50 - 6.50	UFSB-UNC	Soil	2/8/2018	N	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U
SSC-191	16.00 - 17.00	UFSB-UNC	Soil	2/8/2018	N	< 10.2 U	< 10.2 U	< 10.2 U	< 10.2 U	< 10.2 U	< 10.2 U	< 10.2 U	< 10.2 U	< 10.2 U
SSC-192	16.00 - 17.00	UFSB-UNC	Soil	2/8/2018	FD	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U	< 8.4 U
SSC-192	2.00 - 3.00	UFSB-UNC	Soil	2/8/2018	N	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U	< 6.2 U
SSC-192	6.00 - 7.00	UFSB-UNC	Soil	2/8/2018	N	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U	< 7.1 U
SSC-192	16.00 - 17.00	UFSB-UNC	Soil	2/8/2018	N	< 9.0 U	< 9.0 U	< 9.0 U	< 9.0 U	< 9.0 U	9.1 J	< 9.0 U	< 9.0 U	< 9.0 U
SSC-193	2.00 - 3.00	UFSB-UNC	Soil	2/8/2018	N	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U	< 6.3 U
SSC-193	6.00 - 7.00	UFSB-UNC	Soil	2/8/2018	N	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U	< 7.3 U
SSC-193	16.00 - 17.00	UFSB-UNC	Soil	2/8/2018	N	< 10.0 U	< 10.0 U	< 10.0 U	< 10.0 U	< 10.0 U	< 10.0 U	< 10.0 U	< 10.0 U	< 10.0 U

N – Normal Sample  
 FD – Field Duplicate  
 U – Non-Detect  
 J – Estimated Value



**Table 16: FMSSE TCE Concentrations in 6th FYR Period**

FMSSE	Date	UFSB Wells										
		SSC-11	SSC-13	SSC-20	SSC-23	SSC-24	SSC-26	SSC-27	SSC-29 (3)	SSC-30	SSC-31	SSC-32
18	Sep-16	70,700	0.88 J	0.85 J	2	495	2	2	263	2	3	28
19	Mar-17	84,900	< 1.0	1	2	455	2	3	7,080	1	2	27
20	Sep-17	80,200	< 1.0	< 1.0	2	227	23	4	11,800	< 1.0	18	45
21	Mar-18	88,400	< 1.0	< 1.0	3	240	< 1.0	< 1.0	8,470	2	1	44
22	Oct-18	85,600	< 1.0	< 1.0	3	372	< 1.0	< 1.0	837	2	2	36
23	Oct-19	90,600	< 1.0	< 1.0	3	257	1	3	9,240	1	6	23
24	Oct-20	< 250	< 2.5	< 1.0	3	195	NS	NS	1,770	NS	1	20
FMSSE	Date	SBR Wells					DBR Wells					
		REM-2	SSC-1A	SSC-3A (4)	SSC-4A	SSC-6C (5)	REM-1	SSC-1B	SSC-2B	SSC-3B	SSC-4B	SSC-6B
18	Sep-16	2,650	<1.0	<1.0	<1.0	29	94	NS	<1.0	6	<1.0	<1.0
19	Mar-17	2,580	< 1.0	<1.0	< 1.0	69	111	NS	< 1.0	7	< 1.0	< 1.0
20	Sep-17	1,210	< 1.0	< 1.0	< 1.0	65	112	NS	< 1.0	7	< 1.0	< 1.0
21	Mar-18	489	< 1.0	< 1.0	< 1.0	71	134	NS	< 1.0	6	< 1.0	< 1.0
22	Oct-18	1,240	< 1.0	< 1.0	< 1.0	48	190	NS	< 1.0	5	< 1.0	< 1.0
23	Oct-19	842	< 1.0	< 1.0	< 1.0	83	99	NS	< 1.0	6	< 1.0	< 1.0
24	Oct-20	39	NS	NS	NS	21	129	NS	NS	4	NS	NS

\* Highlighted value indicates results above MCL or RSL of 5

NS – Not Sampled

## APPENDIX D

### FM/ED AGREEMENT 6<sup>th</sup> MODIFICATION

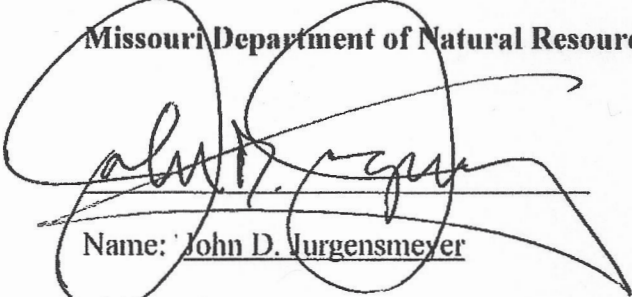
**SIXTH MODIFICATION OF  
AGREEMENT FOR ADDITIONAL REASONABLY NECESSARY TIME  
REGARDING FORCE MAJEURE/EXCUSABLE DELAY**

This Agreement ("Agreement"), effective June 30, 2020, is entered into between MRAC, Inc. ("MRAC"), formerly known as Solid State Circuits, Inc. and the Missouri Department of Natural Resources ("MDNR") (collectively referred to herein as the "Parties").

The Parties hereby agree to an extension of the Second Modification of Agreement for Additional Reasonably Necessary Time Regarding Force Majeure/Excusable Delay, dated February 5, 2015, which is incorporated herein by reference, but subject to an amended schedule of work product deliverables and due dates reflected in the attached "Revised SSC Superfund Site Project Schedule" with a final termination date of December 31, 2024.

**Missouri Department of Natural Resources**

**MRAC, Inc.**

  
Name: John D. Jurgensmeyer

Title: Director, Environmental Remediation Program

Date:

7/1/2020

  
Name: John Galasso

Title: Remediation Manager

Date:

7/1/2020

## Revised SSC Superfund Site Project Schedule

TASK	ESTIMATED COMPLETION DATE	2020			2021				2022				2023				2024			
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
VI Investigation Activities																				
Sanitary Sewer Gas Sampling	6/19/2020																			
Agency Outreach	9/27/2020																			
Supplemental VI Investigation and Reporting Activities (TBD)	12/31/2020																			
FFS Work Plan																				
Draft work plan	7/17/2020																			
Agency review, meeting, approval to proceed	9/16/2020																			
FFS Data Gaps Field Work																				
GW delineation, Area 2/3 soil sampling, etc.	12/22/2020																			
FFS Data Gaps Investigation Report	3/22/2021																			
Five-Year Report	8/31/2021																			
Agencies Five-Year Review Report	10/1/2022																			
Area 1 Soil Remediation																				
Remedial Action <sup>(1)</sup>	7/23/2020																			
Remedial Action Performance Monitoring <sup>(2)</sup>	4/15/2022																			
Post-Treatment GWM - risk assessment data <sup>(2)</sup>	4/15/2024																			
Post-Treatment Area 1 Soil Sampling - risk assessment data <sup>(3)</sup>	10/27/2022																			
FMSSE Sampling Events and Reporting																				
Ongoing	Ongoing																			
FFS Report (site-wide updated CSM, risk assessment, remedial alternatives evaluation)																				
Submit Draft Report	7/15/2024																			
Agency review	9/14/2024																			
Submit Final Report	11/13/2024																			
Agency approval of Final Report	12/13/2024																			

### Notes

- (1) Assumes one injection event for Area 1
- (2) Area 1 groundwater monitoring results to be reported in FMSSE reports
- (3) Area 1 post-treatment soil sampling results to be reported in FMSSE report

**SECOND MODIFICATION OF  
AGREEMENT FOR ADDITIONAL REASONABLY NECESSARY TIME  
REGARDING FORCE MAJEURE/EXCUSABLE DELAY**

This Agreement (“Agreement” or “Second Modified Agreement”) is entered into and effective as of February 5, 2015, between MRAC, Inc. (“MRAC”), formerly known as Solid State Circuits, Inc. and the Missouri Department of Natural Resources (“Department”) (collectively referred to herein as the “Parties”).

**RECITALS**

WHEREAS, on September 27, 1989, a Record of Decision (“ROD”) was finalized for the Site specifying the Superfund remedial action to be implemented at the Solid State Circuits Site (“Site”) in Republic, Missouri;

WHEREAS, on July 2, 1990, Solid States Circuits, Inc. entered into a Consent Decree (U.S. Dist. Ct., W.D. Mo. Case No. 90-cv-3545) with the Department and the U.S. Environmental Protection Agency (“EPA”) (hereinafter collectively “the Agencies”) regarding the Site, specifying remedial actions to be undertaken at the Site including groundwater extraction and treatment;

WHEREAS, the Department is the “lead agency” for the Site, and the EPA is the “support agency” for the Site as those terms are defined in 40 CFR 300.5;

WHEREAS, the Statement of Work (“SOW”) (Appendix 2 to the Consent Decree) specified those activities determined to be appropriate and sufficient by the Department, the EPA, and SSC to effectively implement the selected remedy and required MRAC to implement and maintain an air stripper treatment system to achieve specific performance standards in Section 5 of the SOW that are protective of human health and the environment;

WHEREAS, on December 8, 2011, a fire destroyed the air stripper treatment system and associated equipment and building that were in operation at the Site since 1991 as part of the remedial action implemented according to the Consent Decree and ROD for the Site;

WHEREAS, on December 8, 2011, MRAC notified the Agencies by phone and in writing of the destruction of the treatment system and provided official notice of a “Force Majeure/Excusable Delay” event pursuant to Section XX of the Consent Decree, which the Department recognized on December 29, 2011 (hereinafter “the December 2011 FM/ED Event”);

WHEREAS, on June 15, 2012, an agreement was made pursuant to Paragraph 73 of the Consent Decree (“Original FM/ED Agreement”) which documented and set forth the terms and conditions for a reasonably necessary extension of time for performance of the obligations and/or subsequent obligations affected by the December 2011 FM/ED Event and for MRAC to conduct additional remedial actions pursuant to this agreement so as to protect human health and the environment at the Site;



WHEREAS, effective December 8, 2014, the Parties entered into a First Modification of the FM/ED Agreement for the purpose of extending the termination period from December 8, 2014, until February 6, 2015, ("First Modified FM/ED Agreement");

WHEREAS, the Work under the Original FM/ED Agreement and First Modified FM/ED Agreement has not been completed despite good faith efforts and additional time is needed to complete the Work under those agreements;

WHEREAS, this Second Modified Agreement is made pursuant to Paragraph 73 of the Consent Decree and paragraph 15 of the Original FM/ED Agreement to document and set forth the revised terms and conditions for a reasonably necessary extension of time for performance of the obligations and/or subsequent obligations affected by the December 2011 FM/ED Event and for MRAC to conduct additional remedial actions pursuant to this Agreement so as to protect human health and the environment at the Site;

NOW THEREFORE, in consideration of the foregoing and the mutual promises and covenants contained herein, the sufficiency of which is hereby acknowledged and subject to modification according to this Agreement, the Parties agree that the Original FM/ED Agreement and First Modified FM/ED Agreement are hereby revoked and replaced with this Agreement as follows:

### **TERMS & CONDITIONS**

1. Definitions – The term "Work" as used in this Agreement means only the Work under this Agreement and does not mean the term "Work" as defined in the Consent Decree.

2. Pilot Program Work Plan for Area 1 – On June 13, 2012, the Agencies approved the "Pilot Program Work Plan for In-Situ Soil Blending Treatment for Area 1" ("Area 1 Pilot Program Work Plan") that MRAC had submitted. The Area 1 Pilot Program Work Plan included any necessary changes to the Site's groundwater monitoring program so as to assure protection of human health and the environment. Upon receipt of the Department's written approval, MRAC began performance of work in the Area 1 Pilot Program Work Plan according to the schedule contained therein.

3. Pilot Program for In-Situ Soil Blending Treatment Report for Area 1 – On January 22, 2015, MRAC submitted to the Agencies for review and approval the "Pilot Program for In-Situ Soil Blending Treatment, Final Report" for Area 1 describing the work performed according to the Department approved Area 1 Pilot Program Work Plan, in accordance with the schedule for submittal contained therein, including any necessary changes to the Site's groundwater monitoring program so as to assure protection of human health and the environment.

4. Supplemental Work Plan for Areas 2 and 3 Characterization and Treatability Investigation Work Plan – On October 6, 2014, the Agencies approved the "Supplemental Work Plan for Areas 2 and 3, Characterization and Treatability Investigation (Revised)" that MRAC had submitted. The Supplemental Work Plan for Areas 2 and 3, Characterization and Treatability Investigation (Revised) describes the sampling and analyses and other work needed to fully characterize the quantities and extent of contamination in Areas 2 and 3, and for evaluation of soil cleanup alternatives. The Supplemental Work Plan for Areas 2 and 3, Characterization and Treatability Investigation (Revised) included any necessary changes to the Site's groundwater



monitoring program so as to assure protection of human health and the environment. Upon receipt of Department's written approval, MRAC began the performance of work under the Supplemental Work Plan for Areas 2 and 3 Characterization and Treatability Investigation (Revised) according to the Target Schedule for FM/ED Agreement Completion, as attached to this Agreement and incorporated by reference herein.

5. Supplemental Areas 2 and 3 Characterization and Treatability Investigation Report/Areas 2 and 3 Pilot Program Work Plan – Consistent with the Target Schedule for FM/ED Agreement Completion, within 60 days (May 2015) of completion of work performed under the Supplemental Work Plan for Areas 2 and 3 Characterization and Treatability Investigation (Revised), MRAC shall schedule a pre-submittal meeting with the Agencies to present the investigation findings and propose pilot project work based on those findings. As agreed upon by the Parties at the pre-submittal meeting in May 2015, MRAC shall submit within 30 days (June 2015) of the meeting to the Agencies for review and approval the Supplemental Areas 2 and 3 Characterization and Treatability Investigation Report and Areas 2 and 3 Pilot Program Work Plan. The Supplemental Areas 2 and 3 Characterization and Treatability Investigation Report shall describe work performed according to the Department's approved October 2014 Supplemental Work Plan for Areas 2 and 3 Characterization and Treatability Investigation (Revised), including any necessary changes to the Site's groundwater monitoring program so as to assure protection of human health and the environment. The Area 2 and 3 Pilot Program Work Plan shall include any necessary changes to the Site's groundwater monitoring program so as to assure protection of human health and the environment. Upon receipt of the Department's written approval, MRAC shall implement the Areas 2 and 3 Pilot Program Work Plan according to the Target Schedule for FM/ED Agreement Completion.

6. Areas 2 and 3 Pilot Program Assessment and Report – Consistent with Target Schedule for FM/ED Agreement Completion, within 270 days of the Agencies review and approval of the Areas 2 and 3 Pilot Program Work Plan (May 2016) MRAC shall submit for the Agencies review and approval the Areas 2 and 3 Pilot Program Assessment and Report describing work performed according to the Department's approved Areas 2 and 3 Pilot Program Work Plan, in accordance with the schedule for submittal contained therein, including any necessary changes to the Site's groundwater monitoring program so as to assure protection of human health and the environment. The Agencies shall review and approve the Areas 2 and 3 Pilot Program Assessment and Report within 60 days (July 2016).

7. Focused Feasibility Study Work Plan – Consistent with Target Schedule for FM/ED Agreement Completion, within 60 days of approval of the Areas 2 and 3 Pilot Program Assessment and Report (September 2016), MRAC shall submit a Focused Feasibility Study ("FFS") Work Plan for the Site. The FFS Work Plan will describe activities required for MRAC to complete the FFS including any necessary changes to the Site's groundwater monitoring program so as to assure protection of human health and the environment and additional pilot testing, as warranted. The Agencies shall review and approve the FFS Work Plan within 90 days. Upon receipt of Department's written approval (December 2016), MRAC shall implement the FFS Work Plan according to the Target Schedule for FM/ED Agreement Completion.

8. Focused Feasibility Study Report – Consistent with Target Schedule for FM/ED Agreement Completion, within 135 days of the Agencies' approval of the FFS Work Plan (May



2017), MRAC shall submit to the Agencies for review and approval a FFS Report including an updated conceptual site model and human health and ecological risk assessments, which evaluates a range of remedial action alternatives for the Site, in accordance with the schedule for submittal contained within the Department approved FFS Work Plan. The FFS Report shall address Areas 1, 2, 3, and any other source areas discovered during the work requiring further remedial action, including soil and bedrock, shall address groundwater contamination requiring further remedial action, and shall:

- a. conform to all applicable Agency guidance documents, unless the Department approves of any substantive deviation based on persuasive justification provided by MRAC for such deviation;
- b. describe changes in Site conditions, including any source reduction resulting from the completion of all previous Areas 1, 2 and 3 and any other source areas Work;
- c. evaluate Site risks to human health and the environment following completion of all previous Areas 1, 2 and 3 and any other source areas Work, as well as changes from Site conditions at the time of entry of the Consent Decree according to EPA FFS guidance, "*Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*, October 1988, EPA/540/G-89/004, OSWER Directive 9355.3-01" and risk assessment guidance, "*Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual*, December 1989, EPA/540/1-89/002;"
- d. describe remedial action alternatives determined by MRAC and/or the Agencies to be viable for evaluation in the FFS to address conditions at the Site, including but not limited to monitored natural attenuation and pump and treatment remedial actions, using "*Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA*, October 1988, EPA/540/G-89/004, OSWER Directive 9355.3-01."

9. Contingency Response Actions – If the Department determines continuation of the Work may cause endangerment to human health or the environment, the Department may issue a written notice to MRAC specifying the grounds upon which such notice was issued and require MRAC to submit to the Department within 30 days, or such other reasonable time determined by the Department, a "Contingency Response Action Work Plan" determined through agreement of MRAC and the Department, after consultation with the EPA needed to protect human health and the environment.

10. Department's Reservation of Rights – If: (1) MRAC fails to materially and substantially comply with the terms of this Agreement by, including but not limited to MRAC ceasing implementation of any portion of the Work or is seriously or repeatedly deficient or late in its performance of the Work; or (2) the Department and MRAC fail to agree on a Contingency Response Action Work Plan within 30 days or such other reasonable time determined by the Department, then the Department may by written notice unilaterally terminate this Agreement,



modify or no longer recognize any further excusable delay from the recognized December 2011 FM/ED Event, and seek all remedies available under the Consent Decree, including but not limited to invocation of Paragraph 38 regarding additional response activities and Paragraph 62 concerning endangerment and future response. In particular, the Department reserves its rights, consistent with Paragraph 63, to take such actions as necessary to protect human health and the environment including implementation and restoration of the remedy set forth in the Record of Decision dated September 27, 1989, or the Consent Decree and attached Statement of Work.

11. Consent Decree Applicability – Except as set forth herein, all terms and conditions of the Consent Decree not inconsistent with this Agreement shall remain in effect, including but not limited to: Reporting Requirements (Section XII); Submissions Requiring Agency Approval (Section XIII); Endangerment and Future Response (Section XVII); Reimbursement of Response Costs (Section XVIII); Force Majeure/Excusable Delay (Section XX); Dispute Resolution (XXI); and Covenants Not to Sue (Section XXIII). In particular, MRAC agrees that this Agreement and performance of the Work under it shall be considered a “term and condition” subject to Stipulated Penalties under Paragraph 91 of the Consent Decree. Further, MRAC agrees to waive written notification as provided in Paragraph 91 of the Consent Decree for failure to timely submit documentation or perform required Work established in this Agreement.

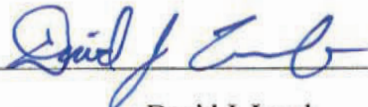
12. Consent Decree Enforcement – the Department agrees to forbear enforcement of the performance standards contained in the Consent Decree and the Statement of Work, including but not limited to, Paragraph 31 of the Consent Decree and Sections 3 and 5 of the Statement of Work, as of the December 2011 FM/ED Event, and lasting until the later of: (1) the completion date of any approved and in-effect FFS Report, or (2) any other corrective measures implemented under this Agreement. In no case shall forbearance under this Agreement last beyond the date of any termination of this Agreement. The Department has conferred with the EPA (also an original signatory to the Consent Decree), and EPA concurs with the terms and conditions of this Agreement, and the EPA acknowledges the Department as the lead agency for the Site regarding implementation of this Agreement and compliance with the Consent Decree.

13. Termination – This Agreement shall terminate upon MRAC’s receipt of the Department’s written approval of the FFS Report, which shall be on or before August 2017 (90 days following the FFS Report submission date of May 2017), unless modified by mutual written agreement of the Parties. In the event the Department unilaterally terminates this Agreement pursuant to Paragraph 12, the time period associated with the December 2011 FM/ED Event and this Agreement shall not be subject to stipulated penalties in any future enforcement of the Consent Decree.

14. Modification – This Agreement may be modified by mutual written agreement of the Parties.

**Missouri Department of Natural Resources**

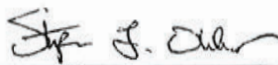
**MRAC Inc.**

  
\_\_\_\_\_

Name: David J. Lamb

Title: Director - Hazardous Waste Program

Date: 3/13/2015

  
\_\_\_\_\_

Name: Stephen L. Oberkrom

Title: Remediation Manager

Date: 3/9/2015



ATTACHMENT TO SECOND MODIFICATION OF  
AGREEMENT FOR ADDITIONAL REASONABLY NECESSARY TIME  
REGARDING FORCE MAJEURE/EXCUSABLE DELAY  
EFFECTIVE FEBRUARY 5, 2015

**Target Schedule for FM/ED Agreement Completion**

**Solid State Circuits Superfund Site**

**Republic, MO**

<b>Task</b>	<b>Days</b>	<b>Month / Year</b>
Areas 2/3 Field Work Completion		
Well installation	15	Feb / 2015
Well development & sampling	7	Mar / 2015
Lab analyses	15	Mar / 2015
Areas 2/3 Report/Pilot Work Plan		
Pre-Submittal Meeting	60	May / 2015
Areas 2/3 Report/Pilot Work Plan Submittal	30	Jun / 2015
Agencies Review/Approve Report/Pilot Work Plan	60	Aug / 2015
Pilot Program Assessment & Report for Areas 2/3	270	May / 2016
Agencies Review/Approve Report for Areas 2/3	60	Jul / 2016
Focused FS Work Plan	60	Sep / 2016
Agencies Review/Approve Focused FS Work Plan	90	Dec / 2016
Focused FS Report	135	May / 2017
Agencies Review/Approve Focused FS Report	90	Aug / 2017

**Notes:**

- Tasks with shadowing indicate Agency review periods.
- For Tasks where MRAC specified deliverables schedules, the company intends to submit documents on a faster timeframe when feasible.

**Appendix E**

**Five-Year Review Site Inspection  
Checklist and Roster**

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### Five-Year Review Site Inspection Checklist

I. SITE INFORMATION			
<b>Site name:</b> Solid State Circuits		<b>Date of inspection:</b> 12/14/2021	
<b>Location and Region:</b> Republic, MO; Region VII		<b>EPA ID:</b> MOD 980854111	
<b>Agency, office, or company leading the five-year review:</b> Missouri Department of Natural Resources		<b>Weather/temperature:</b> Mostly Cloudy, 58° F	
<b>Remedy Includes:</b> (Check all that apply) <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Landfill cover/containment  <input checked="" type="checkbox"/> Access controls  <input checked="" type="checkbox"/> Institutional controls  <input checked="" type="checkbox"/> Groundwater pump and treatment (until 12/08/2011 fire)  <input type="checkbox"/> Surface water collection and treatment  <input checked="" type="checkbox"/> Other <u>The site is currently operating under a Force Majeure/Excusable Delay Agreement, which has allowed the operation of ongoing pilot studies in impacted soil areas, groundwater, and vapor intrusion to assist in determining the site's path forward.</u> </div> <div style="width: 50%;"> <input type="checkbox"/> Monitored natural attenuation  <input checked="" type="checkbox"/> Groundwater containment (unknown at this time)  <input type="checkbox"/> Vertical barrier walls           </div> </div>			
<b>Attachments:</b> <input checked="" type="checkbox"/> Inspection team roster attached <input type="checkbox"/> Site map attached			
II. INTERVIEWS (Check all that apply)			
1. <b>O&amp;M site manager</b> <u>Anthony Moore</u> <u>Senior Project Manager for EWI</u> <u>12/14/2021</u> <div style="display: flex; justify-content: space-between; margin-left: 100px;"> <span>Name</span> <span>Title</span> <span>Date</span> </div> Interviewed <input checked="" type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone    Phone no. _____ Problems, suggestions; <input type="checkbox"/> Report attached <u>Pleased with progress of site remediation.</u>			
2. <b>O&amp;M staff</b> <u>Anthony Moore</u> <u>Senior Project Manager for EWI</u> <u>12/14/2021</u> <div style="display: flex; justify-content: space-between; margin-left: 100px;"> <span>Name</span> <span>Title</span> <span>Date</span> </div> Interviewed <input checked="" type="checkbox"/> at site <input type="checkbox"/> at office <input type="checkbox"/> by phone    Phone no. _____ Problems, suggestions; <input type="checkbox"/> Report attached <u>Pleased with progress of site remediation.</u>			
3. <b>Local regulatory authorities and response agencies</b> (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.  <div style="margin-left: 100px;">             Agency <u>Republic BUILDS Department</u>              Contact <u>Garrett Brickner</u>    <u>Engineering Manager</u>    <u>12/08/2021</u>    <u>417-732-3405</u>    <u>Email Interview</u>  <div style="display: flex; justify-content: space-between; margin-left: 100px;"> <span>Name</span> <span>Title</span> <span>Date</span> <span>Phone no.</span> </div>             Problems; suggestions; <input type="checkbox"/> Report attached <u>None.</u> </div>			
4. <b>Other interviews:</b> None <input type="checkbox"/> Report attached.			

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)			
1.	<b>O&amp;M Documents</b> <input checked="" type="checkbox"/> O&M manual <input checked="" type="checkbox"/> As-built drawings <input checked="" type="checkbox"/> Maintenance logs Remarks <u>There are no permanent buildings on site. EWI maintains copies of the O&amp;M Plans, as-built drawings, maintenance logs and all other site-related documents and plans at their Springfield, MO office, on servers, or in cloud-based storage. The Republic Branch Library maintains site documents as well.</u>	<input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A
2.	<b>Site-Specific Health and Safety Plan</b> <input checked="" type="checkbox"/> Contingency plan/emergency response plan Remarks <u>There are no permanent buildings on site. EWI maintains copies of the HASP and Contingency/Emergency Response Plan at their Springfield, MO office, on servers, or in cloud-based storage. The Republic Branch Library maintains site documents as well.</u>	<input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date <input type="checkbox"/> N/A <input type="checkbox"/> N/A
3.	<b>O&amp;M and OSHA Training Records</b> Remarks <u>There are no permanent buildings on site. EWI maintains copies of the O&amp;M Plans and OSHA training records at their Springfield, MO office, on servers, or in cloud-based storage..</u>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> N/A
4.	<b>Permits and Service Agreements</b> <input type="checkbox"/> Air discharge permit <input checked="" type="checkbox"/> Effluent discharge <input checked="" type="checkbox"/> Waste disposal, POTW <input type="checkbox"/> Other permits _____ Remarks <u>There are no permanent buildings on site. EWI maintains copies of the Effluent Discharge and Waste Disposal Reports, the POTW (NPDES/MSOP permit) at their Springfield, MO office, on servers, or in cloud-based storage. The Republic Branch Library maintains site documents as well.</u>	<input type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A <input type="checkbox"/> N/A <input checked="" type="checkbox"/> N/A
5.	<b>Gas Generation Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A
6.	<b>Settlement Monument Records</b>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A
7.	<b>Groundwater Monitoring Records</b> Remarks <u>There are no permanent buildings on site. EWI maintains copies of the HASP and Contingency/Emergency Response Plan at their Springfield, MO office, on servers, or in cloud-based storage. The Republic Branch Library maintains site documents as well.</u>	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date <input type="checkbox"/> N/A
8.	<b>Leachate Extraction Records</b> Remarks	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A
9.	<b>Discharge Compliance Records</b> <input type="checkbox"/> Air <input checked="" type="checkbox"/> Water (effluent) Remarks <u>There are no permanent buildings on site. EWI maintains copies of the Effluent Discharge and Waste Disposal Reports, the POTW (NPDES/MSOP permit) at their Springfield, MO office, on servers, or in cloud-based storage. The Republic Branch Library maintains site documents as well.</u>	<input type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A <input type="checkbox"/> N/A
10.	<b>Daily Access/Security Logs</b> Remarks <u>Site access gates are locked, and the source area is surrounded by chain-link fence topped with barbed wire. The fence is in good condition.</u>	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input checked="" type="checkbox"/> N/A



<b>IV. O&amp;M COSTS</b>																																											
1.	<b>O&amp;M Organization</b> <input type="checkbox"/> State in-house <input type="checkbox"/> Contractor for State <input checked="" type="checkbox"/> PRP in-house <input checked="" type="checkbox"/> Contractor for PRP <input type="checkbox"/> Federal Facility in-house <input type="checkbox"/> Contractor for Federal Facility <input type="checkbox"/> Other _____																																										
2.	<b>O&amp;M Cost Records</b> <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Up to date <input checked="" type="checkbox"/> Funding mechanism/agreement in place Original O&M cost estimate was presented as an <u>annual cost of \$445,300 per FS</u> <input type="checkbox"/> Breakdown attached  <p style="text-align: center;">Total annual cost by year for review period if available</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">From <u>01/01/2017</u></td> <td style="width: 10%;">To <u>12/31/2017</u></td> <td style="width: 20%; text-align: right;"><u>\$ 460,000</u></td> <td style="width: 50%;"><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From <u>01/01/2018</u></td> <td>To <u>12/31/2018</u></td> <td style="text-align: right;"><u>\$310,000</u></td> <td><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From <u>01/01/2019</u></td> <td>To <u>12/31/2019</u></td> <td style="text-align: right;"><u>\$325,000</u></td> <td><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From <u>01/01/2020</u></td> <td>To <u>12/31/2020</u></td> <td style="text-align: right;"><u>\$627,000</u></td> <td><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> <tr> <td>From <u>01/01/2021</u></td> <td>To <u>12/31/2021</u></td> <td style="text-align: right;"><u>\$694,000</u></td> <td><input type="checkbox"/> Breakdown attached</td> </tr> <tr> <td style="text-align: center;">Date</td> <td style="text-align: center;">Date</td> <td style="text-align: center;">Total cost</td> <td></td> </tr> </table>			From <u>01/01/2017</u>	To <u>12/31/2017</u>	<u>\$ 460,000</u>	<input type="checkbox"/> Breakdown attached	Date	Date	Total cost		From <u>01/01/2018</u>	To <u>12/31/2018</u>	<u>\$310,000</u>	<input type="checkbox"/> Breakdown attached	Date	Date	Total cost		From <u>01/01/2019</u>	To <u>12/31/2019</u>	<u>\$325,000</u>	<input type="checkbox"/> Breakdown attached	Date	Date	Total cost		From <u>01/01/2020</u>	To <u>12/31/2020</u>	<u>\$627,000</u>	<input type="checkbox"/> Breakdown attached	Date	Date	Total cost		From <u>01/01/2021</u>	To <u>12/31/2021</u>	<u>\$694,000</u>	<input type="checkbox"/> Breakdown attached	Date	Date	Total cost	
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3.	<b>Unanticipated or Unusually High O&amp;M Costs During Review Period</b> Describe costs and reasons: <u>No unanticipated or unusually high costs related to operation and maintenance of the remedy. There is still significant activity and associated costs related to the site, but most site activity is being conducted under a Force Majeure/Excusable Delay and/or as pilot studies. The pilot studies will determine whether the implemented remedial actions for the source soils are remediating the VOC contamination within the soils. Limited on-site and off-site groundwater monitoring is being conducted to verify the location of the site's contaminant plumes in the three hydrogeological zones and monitor the remediation of the source soils in Areas 1, 2 and 3, and to assess vapor intrusion risk.</u>																																										

<b>V. ACCESS AND INSTITUTIONAL CONTROLS</b> <input type="checkbox"/> Applicable <input type="checkbox"/> N/A			
<b>A. Fencing</b>			
1.	<b>Fencing damaged</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Gates secured <input checked="" type="checkbox"/> N/A
Remarks <u>No damage to the fence or gates were evident during the site visit (12/14/2021).</u>			
<b>B. Other Access Restrictions</b>			
1.	<b>Signs and other security measures</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
Remarks <u>The SSC site is fenced and topped with strands of barbed wire. There is a walk-in gate and drive through gate that are always locked. There are signs on the fence on two sides. A third side sign is located on the drive through gate. The Responsible Party's contractor will replace a missing sign on the north side of the fence. The north side sign likely became detached during a high wind event.</u>			
<b>C. Institutional Controls (ICs)</b>			
1.	<b>Implementation and enforcement</b>		
Site conditions imply ICs not properly implemented		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Site conditions imply ICs not being fully enforced		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No <input type="checkbox"/> N/A
Type of monitoring (e.g., self-reporting, drive by) <u>Self-reporting</u>			
Frequency <u>Semi-annual, and annual.</u>			
Responsible party/agency <u>Environmental Works Inc., on behalf of Missouri Remedial Action Corporation.</u>			
Contact	<u>Anthony Moore,</u>	<u>Senior Project Manager</u>	<u>12/14/2021</u> <u>417-773-5747</u>
	Name	Title	Date Phone no.
Reporting is up-to-date		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
Reports are verified by the lead agency		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
Specific requirements in deed or decision documents have been met		<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A
Violations have been reported		<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A
Other problems or suggestions: <input type="checkbox"/> Report attached			
<u>The write-up regarding ICs can be found in this FYR Report (II. Response Action Summary, IC Summary Table).</u>			
_____			
2.	<b>Adequacy</b>	<input checked="" type="checkbox"/> ICs are adequate	<input type="checkbox"/> ICs are inadequate <input type="checkbox"/> N/A
Remarks <u>The city of Republic instituted a City Ordinance within the city limits and the State of Missouri established a "Sensitive Area C" designation within Greene County. The Republic Ordinance prohibits the installation of new wells without prior approval by Republic and the SSC site Missouri Project Manager; and Missouri "Sensitive Area C" established the criteria for installing new wells.</u>			

<b>D. General</b>			
1.	<b>Vandalism/trespassing</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No vandalism evident
Remarks _____			
2.	<b>Land use changes on site</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Remarks: <u>Land use within the fenced source area did not change during the review period. At the time of the site inspection, Liberty Electric was using the site's southern parcel as a staging area for dumpsters and equipment related to utility line repairs, and as a parking lot. This activity was not observed during a prior site visit in October 2021.</u>			
3.	<b>Land use changes off site</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Remarks <u>The former daycare facility (Kid Zone) north of the site is being renovated and turned into a dog kennel/ doggy daycare.</u>			
<b>VI. GENERAL SITE CONDITIONS</b>			
<b>A. Roads</b>		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	<b>Roads damaged</b>	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Roads adequate <input type="checkbox"/> N/A
Remarks <u>Upon entering the site through the gate, there is a gravel driveway/parking area on the east side of the site that extends to the northern fence. There is also a gravel area extending along the east side of the source area from E. Elm Street, through the southern parcel, to E Mill Street.</u>			
<b>B. Other Site Conditions</b>		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
Remarks <u>There is one small storage building and a Baker tank on site. The building stores a variety of supplies and the Baker tank temporarily stores collected purge and sampling water until it is sampled and properly disposed off site. There are still a number on-site extraction and monitoring wells, and a vault that was part of the horizontal extraction well. There are currently no trees; however, there is an adequate grass cover.</u>			

VII. LANDFILL COVERS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
<b>A. Landfill Surface</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1.	<b>Settlement</b> (Low spots) Areal extent _____ Depth _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Settlement not evident
2.	<b>Cracks</b> Lengths _____ Widths _____ Depths _____ Remarks _____	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Cracking not evident
3.	<b>Erosion</b> Areal extent _____ Depth _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Erosion not evident
4.	<b>Holes</b> Areal extent _____ Depth _____ Remarks _____	<input type="checkbox"/> Location shown on site map Depth _____	<input type="checkbox"/> Holes not evident
5.	<b>Vegetative Cover</b> <input type="checkbox"/> Grass <input type="checkbox"/> Cover properly established <input type="checkbox"/> No signs of stress <input type="checkbox"/> Trees/Shrubs (indicate size and locations on a diagram) Remarks _____		
6.	<b>Alternative Cover (armored rock, concrete, etc.)</b> <input checked="" type="checkbox"/> N/A Remarks _____		
7.	<b>Bulges</b> Areal extent _____ Height _____ Remarks _____	<input type="checkbox"/> Location shown on site map Height _____	<input type="checkbox"/> Bulges not evident
8.	<b>Wet Areas/Water Damage</b> <input type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Wet areas <input type="checkbox"/> Location shown on site map    Areal extent _____ <input type="checkbox"/> Ponding <input type="checkbox"/> Location shown on site map    Areal extent _____ <input type="checkbox"/> Seeps <input type="checkbox"/> Location shown on site map    Areal extent _____ <input type="checkbox"/> Soft subgrade <input type="checkbox"/> Location shown on site map    Areal extent _____ Remarks _____		
9.	<b>Slope Instability</b> <input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of slope instability Areal extent _____ Remarks _____		

<b>B. Benches</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)		
1.	<b>Flows Bypass Bench</b> Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
2.	<b>Bench Breached</b> Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
3.	<b>Bench Overtopped</b> Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A or okay
<b>C. Letdown Channels</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)		
1.	<b>Settlement</b> Areal extent _____      Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of settlement
2.	<b>Material Degradation</b> Material type _____      Areal extent _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of degradation
3.	<b>Erosion</b> Areal extent _____      Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of erosion
4.	<b>Undercutting</b> Areal extent _____      Depth _____ Remarks _____ _____	<input type="checkbox"/> Location shown on site map <input type="checkbox"/> No evidence of undercutting
5.	<b>Obstructions</b> Type _____ <input type="checkbox"/> Location shown on site map      Areal extent _____ Size _____ Remarks _____ _____	<input type="checkbox"/> No obstructions
6.	<b>Excessive Vegetative Growth</b> Type _____ <input type="checkbox"/> No evidence of excessive growth <input type="checkbox"/> Vegetation in channels does not obstruct flow <input type="checkbox"/> Location shown on site map      Areal extent _____ Remarks _____ _____	



<b>D. Cover Penetrations</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1.	<b>Gas Vents</b>	<input type="checkbox"/> Active <input type="checkbox"/> Passive	
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
	<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs Maintenance
	<input type="checkbox"/> N/A		
	Remarks _____		
2.	<b>Gas Monitoring Probes</b>		
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
	<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A
	Remarks _____		
3.	<b>Monitoring Wells</b> (within surface area of landfill)		
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
	<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A
	Remarks _____		
4.	<b>Leachate Extraction Wells</b>		
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition
	<input type="checkbox"/> Evidence of leakage at penetration		<input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A
	Remarks _____		
5.	<b>Settlement Monuments</b>	<input type="checkbox"/> Located	<input type="checkbox"/> Routinely surveyed <input type="checkbox"/> N/A
	Remarks _____		
<b>E. Gas Collection and Treatment</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A			
1.	<b>Gas Treatment Facilities</b>		
	<input type="checkbox"/> Flaring	<input type="checkbox"/> Thermal destruction	<input type="checkbox"/> Collection for reuse
	<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance	
	Remarks _____		
2.	<b>Gas Collection Wells, Manifolds and Piping</b>		
	<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance	
	Remarks _____		
3.	<b>Gas Monitoring Facilities</b> (e.g., gas monitoring of adjacent homes or buildings)		
	<input type="checkbox"/> Good condition	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
	Remarks _____		

<b>F. Cover Drainage Layer</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Outlet Pipes Inspected</b>	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
2.	<b>Outlet Rock Inspected</b>	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
<b>G. Detention/Sedimentation Ponds</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Siltation</b> Areal extent _____ Depth _____	<input type="checkbox"/> N/A	
<input type="checkbox"/> Siltation not evident			
Remarks _____			
2.	<b>Erosion</b> Areal extent _____ Depth _____		
<input type="checkbox"/> Erosion not evident			
Remarks _____			
3.	<b>Outlet Works</b>	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
4.	<b>Dam</b>	<input type="checkbox"/> Functioning	<input type="checkbox"/> N/A
Remarks _____			
<b>H. Retaining Walls</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Deformations</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Deformation not evident
Horizontal displacement _____		Vertical displacement _____	
Rotational displacement _____			
Remarks _____			
2.	<b>Degradation</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Degradation not evident
Remarks _____			
<b>I. Perimeter Ditches/Off-Site Discharge</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Siltation</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> Siltation not evident
Areal extent _____		Depth _____	
Remarks _____			
2.	<b>Vegetative Growth</b>	<input type="checkbox"/> Location shown on site map	<input type="checkbox"/> N/A
<input type="checkbox"/> Vegetation does not impede flow			
Areal extent _____		Type _____	
Remarks _____			

3.	<b>Erosion</b> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Erosion not evident Areal extent _____ Depth _____ Remarks _____ _____
4.	<b>Discharge Structure</b> <input type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____ _____
<b>VIII. VERTICAL BARRIER WALLS</b> <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A	
1.	<b>Settlement</b> <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent _____ Depth _____ Remarks _____ _____
2.	<b>Performance Monitoring</b> Type of monitoring _____ <input type="checkbox"/> Performance not monitored Frequency _____ <input type="checkbox"/> Evidence of breaching Head differential _____ Remarks _____ _____

<b>IX. GROUNDWATER/SURFACE WATER REMEDIES</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
<b>A. Groundwater Extraction Wells, Pumps, and Pipelines</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	<b>Pumps, Wellhead Plumbing, and Electrical</b> <input checked="" type="checkbox"/> Good condition <input checked="" type="checkbox"/> All required wells properly operating <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks <u>Extraction wells associated with the former treatment building are still in place and are in secure working order, but are not being used as initially intended due to the destruction of the treatment building.</u>
2.	<b>Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances</b> <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks <u>The extraction well SSC-31 is still operational. It is located south of the source area adjacent to Highway 60.</u>
3.	<b>Spare Parts and Equipment</b> <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks <u>The consultant has maintained a good inventory of spare parts and equipment to keep the site-related extraction and monitoring wells operational.</u>
<b>B. Surface Water Collection Structures, Pumps, and Pipelines</b> <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	<b>Collection Structures, Pumps, and Electrical</b> <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input checked="" type="checkbox"/> N/A Remarks <u>There are no surface water collection activities associated with the site at this time.</u>
2.	<b>Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances</b> <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input checked="" type="checkbox"/> N/A Remarks <u>There are no surface water collection activities associated with the site at this time.</u>
3.	<b>Spare Parts and Equipment</b> <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks <u>There are no surface water collection activities associated with the site at this time.</u>

<b>C. Treatment System</b>		<input type="checkbox"/> Applicable	<input checked="" type="checkbox"/> N/A
1.	<b>Treatment Train</b> (Check components that apply) <input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation <input type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Filters _____ <input type="checkbox"/> Additive (e.g., chelation agent, flocculent) _____ <input type="checkbox"/> Others _____ <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> Sampling ports properly marked and functional <input type="checkbox"/> Sampling/maintenance log displayed and up to date <input type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually _____ <input type="checkbox"/> Quantity of surface water treated annually _____ Remarks		
2.	<b>Electrical Enclosures and Panels</b> (properly rated and functional) <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks		
3.	<b>Tanks, Vaults, Storage Vessels</b> <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs Maintenance Remarks <u>There is an on-site vault associated with the former horizontal extraction well. It is covered with a heavy steel lid, and is inside of the fenced-in source area.</u>		
4.	<b>Discharge Structure and Appurtenances</b> <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks		
5.	<b>Treatment Building(s)</b> <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition (esp. roof and doorways) <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored Remarks		
6.	<b>Monitoring Wells</b> (pump and treatment remedy) <input checked="" type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input checked="" type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks <u>On-site and off-site monitoring wells are sampled on a regular basis as outlined in the QAPP and SAP relating to the Force Majeure/Excusable Delay Agreement.</u>		
<b>D. Monitoring Data</b>			
1.	Monitoring Data <input checked="" type="checkbox"/> Is routinely submitted on time <input checked="" type="checkbox"/> Is of acceptable quality Remarks <u>Overall, the monitoring data supplied by the consultant has been routinely submitted on time and is of acceptable quality.</u>		
2.	Monitoring data suggests: <input type="checkbox"/> Groundwater plume is effectively contained <input type="checkbox"/> Contaminant concentrations are declining Remarks <u>Due to the December 8, 2011 fire, the EPA changed the status of the "Groundwater Under Control Environmental Indicator" for the SSC site to "Not Under Control effective January 27, 2012. Ongoing monitoring will determine the answer to this question.</u>		



<b>D. Monitored Natural Attenuation</b>			
1.	<b>Monitoring Wells</b> (natural attenuation remedy) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Routinely sampled <input type="checkbox"/> Good condition <input type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input checked="" type="checkbox"/> N/A Remarks		
<b>X. OTHER REMEDIES</b>			
<p>If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.</p> <p><u>The responsible party conducted soil treatment, groundwater monitoring, and vapor intrusion assessment and mitigation related to the site during the review period. However, none of these activities involves a facility that could be inspected.</u></p>			
<b>XI. OVERALL OBSERVATIONS</b>			
<b>A. Implementation of the Remedy</b>			
<p>Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).</p> <p><u>The RAO goals of the SSC site remedial action were to contain and remediate the VOC contamination in the three groundwater aquifers and to restore the three aquifers to “any use” conditions through the implementation of the on-site pump and treat operation. Until the December 8, 2011 on-site fire, groundwater sampling and monitoring determined that the remedial action was achieving VOC contaminant containment, was achieving limited removal success and was slowly restoring the three groundwater aquifers. In June and July 2020 the Responsible Party conducted soil treatment as the first phase of the Area 1 Soil Pilot Program. Phase II focuses on sampling to assess the effectiveness of Phase I, and is ongoing. The Responsible Party began a vapor intrusion investigation in 2018, and has conducted vapor intrusion mitigation activities since, including residential mitigation and sanitary sewer rehabilitation.</u></p>			
<b>B. Adequacy of O&amp;M</b>			
<p>Describe issues and observations related to the implementation and scope of O&amp;M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.</p> <p><u>The site is experiencing current operational uncertainties due to the December 8, 2011 on-site fire that destroyed the pump and treat operational component of the remedial action. Ongoing monitoring, including a Focused Feasibility Study, performed in response to the 2011 fire must be completed before the long-term protectiveness of the remedy can be determined.</u></p>			

**C. Early Indicators of Potential Remedy Problems**

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future.

The original remedy is no longer operational due to the 2011 fire. There have been no unexpected changes to the remedy or its cost since it ceased to exist in 2011. Costs incurred under the site's Force Majeure/Excusable Delay agreement have been predictable and regular. Vapor Intrusion was not specifically addressed in the original remedy, so costs associated with this exposure pathway could be considered unexpected.

**D. Opportunities for Optimization**

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. Given the site's history, activities are going smoothly. Better communication and cooperation with the current site owners could help establish institutional controls on the site's southern parcel via placement of an environmental covenant.

Site Inspection Team Roster		
Personnel	Representing	Phone Number
TJ Graven	MoDNR	573-751-2469
Anthony Moore	EWI	417-773-5747





Photo 1. Site Signage on west fence.



Photo 2. Utility Shed





Photo 3. Robert Springs



Photo 5. Fenced area secured by lock.





Figure 6. Utility Shed



Photo 7. Looking south at the southern parcel





Photo 8. Looking north at the east side of the fenced in area.



Photo 9. Looking north across the west side of the north parcel.





Photo 10. Looking southeast at the south parcel



Photo 11. Looking south at the north parcel.

ATTACHMENT F

PUBLIC NOTICE



a mutually beneficial relationship. You do that, when an opportunity comes along, you'll be the one they think of.

Networking through social media may seem intimidating, especially if you don't think you know the people, but the truth is that you can reach everything you need to get

## Reach Out to Everyone You Don't Know.

One important thing you can do is to build a network on social media by connecting with people you don't know and your contacts.

Remember that you are unlikely to find opportunities through a close family member because they are likely of the same people that you are trying to connect with them, making you a lot more likely to get re-

requests aren't accepted—the same place you are now.

## Step 2: Get Involved

To build professional relationships on social networks, engage with the content that your new connections share.

As you add more connections, your social media newsfeeds will be populated with content from a more varied group of people. Take in these new perspectives and get to know the type of content they are putting out there. Then, start engaging.

Like, share, and comment on the posts you see. Doing so signals to the poster that you're a fan of their content, and could even create a positive physical reaction in their brain. When someone receives an interaction on something they share, their brain produces dopamine, a chemical response associated with pleasure. Increasing the number of likes a

Carefully curated content that makes them feel good to their followers, it makes them feel good, too. And you'll be the source of that feeling.

## Step 3: Share Your Passions

Build professional relationships on social networks by standing out with content that highlights the topics you are passionate about.

Social media is a two-way street. If you see someone's posts, they can likely see yours. This is your chance to let them know about your passions, interests, and who you are as a person. Everybody has multiple interests, hobbies, and perspectives. Being authentic will help you stand out in a crowded newsfeed and attract other people who are interested in the same topics that you are. (Just be sure the content you share is appropriate. Skip topics that you wouldn't discuss in an actual workplace.)

Being real about your goals and interests will grow interest as you take work on a journey with you. If you are working on restoring a house, learning a new language, or trying to get healthy, sharing your journey with your followers and turning them into people who are invested in seeing you reach your goals. The network of people you originally connected with will see that way once they see your progress and share in your progress.

Once you've built out your network on social media, pay attention to the connections who like and comment on the items you post. They likely share the same passions or are just interested in you as a person. Reach out to them, taking the relationship from the network and into the real world.

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Public Notice: Nixa Public Schools is seeking the following:  
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APPENDIX G

SITE INTERVIEWS



INTERVIEW RECORD		
Site Name: Solid State Circuits		EPA ID No.: MOD980854111
Subject: Sixth Five-Year Review		Time:      Date:
Type: <input type="checkbox"/> Telephone <input type="checkbox"/> Visit <input type="checkbox"/> Other Location of Visit: N/A		<input type="checkbox"/> Incoming <input type="checkbox"/> Outgoing
Contact Made By:		
Name:	Title:	Organization:
Individual Contacted:		
Name: Garrett Brickner	Title: Engineering Manager	Organization: City of Republic
Telephone No: (417) 732-3400 Fax No: E-Mail Address: gbrickner@republicmo.com		Street Address: 204 N Main St. City, State, Zip: Republic, MO 65738
Summary Of Conversation		
<ol style="list-style-type: none"> <li>What is your overall impression of the project? The project is something that can be managed, but will not likely have an ultimate solution anytime soon</li> <li>Is the remedy functioning as expected? How well is the remedy performing? Remedy seems to be focused on tracking contaminant and addressing places where it comes into contact with the general public. Seems to be functioning well in that manner</li> <li>What does the monitoring data show? Are there any trends that show contaminant levels are decreasing? It appears from our last meeting that the plume is shifting slightly overtime through groundwater. I am not sure about decreasing levels.</li> <li>Is there a continuous on-site O&amp;M presence? Describe the staff and frequency of site inspections and activities. There is continuous monitoring but the City is not directly involved.</li> <li>Have there been any significant changes in the O&amp;M requirements, maintenance schedules, or sampling routines since start-up?</li> <li>Have there been unexpected O&amp;M difficulties or costs at the site since start-up?</li> <li>Have there been opportunities to optimize O&amp;M, or sampling efforts?</li> <li>Are you aware of any community concerns regarding the site or its operation and administration? the community is generally concerned about the contamination if they are aware of it.</li> <li>Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.</li> </ol>		

10. Do you have any comments, suggestions, or recommendations regarding the site's management or operations?